

Drug Services Research Survey (DSRS)

Final Report: Phase II

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DRUG SERVICES RESEARCH SURVEY

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EXECUTIVE SUMMARY

This report presents results from the client-level segment of the 1990 Drug Services Research Survey (DSRS) sponsored by the National Institute on Drug Abuse (NIDA). The DSRS client-level data are collected from a stratified sample of 120 drug treatment facilities, sampled from the 1,183 facilities that completed the DSRS mail/telephone survey in the summer of 1990. Data are reported from a sample of 2,182 records of clients discharged from 118 non-correctional facilities during the 12 months between September 1, 1989 and August 31, 1990.

The research objective of the DSRS client data collection is to examine closely modality specific client records for information about the following: the experiences and characteristics of clients recently discharged from treatment; the content and completeness of provider record-keeping; the range and content of drug abuse services provided; and the associated charge amounts and sources of payment for care delivered. The research and analysis focus on: drug use history for client entry into drug or combined drug and alcoholism treatment; a demographic description of clients recently in treatment; documentation of treatment services delivered; discharge circumstances of clients leaving or completing treatment; post-treatment referral information; and documented treatment charges and sources of payment. In this report, information is presented for discharged clients in hospital inpatient, residential, methadone, and outpatient drug free treatment types. Clients classified in the alcohol only treatment type were receiving treatment for alcohol abuse only and had no reported history of abusing illicit drugs. The policy issues addressed include access to treatment; characteristics of all clients in treatment, the treatment characteristics of pregnant women, intravenous drug users, HIV-positive clients, methadone clients, and dual diagnosis clients; services received and length of stay in treatment, and the charges for drug and alcoholism treatment.

Overview of Major Findings

Client Entrance into Treatment

Primary Sources of Referral

- o The four primary sources of referral to treatment are clients themselves (27 percent), the criminal justice system (26 percent), health care providers (14 percent), and other substance abuse treatment programs (11 percent).

- o Self-referral is the most common form of entrance into treatment for clients in methadone programs (53 percent), hospital inpatient (43 percent) and residential treatment (22 percent).
- o The criminal justice system is the major source of referral for clients in outpatient drug free treatment (36 percent) and a less important source for clients in residential treatment (21 percent), hospital inpatient (9 percent), and methadone (6 percent).

Waiting Time

- o For 40 percent of all clients, the waiting time between application and admission could not be determined from the client record. Waiting time was most likely to be unknown among clients admitted into residential treatment (56 percent).
- o Half of all client records indicated that there had been no wait between the time they applied for treatment and the time they were admitted into the program. Hospital inpatient clients had the highest percentage of records which indicated there had been no wait (73 percent).
- o Only 10 percent of all clients had any waiting time which could be identified in the client record.
- o For those 10 percent of clients who had reported waiting time for admission, the average waiting time was 17 days.

Characteristics of Clients in Treatment

Age

- o Clients in the 25-34 year old category represent the largest group (43 percent) in drug treatment. They are almost half of those in treatment in residential (49 percent), methadone (47 percent), hospital inpatient (46 percent), and outpatient drug free (45 percent) treatment.
- o Only about 6 percent of those in treatment are younger than 18. There are no methadone treatment clients under 18 years of age.
- o The age group 25-34 is heavily over-represented in the treatment population relative to their percentage of the United States population.

Race/Ethnicity

- o The majority of clients in drug treatment are non-Hispanic whites (60 percent).
- o Black non-Hispanics are represented in larger numbers in drug treatment than their presence in the general population - 29 percent vs 12 percent.
- o Hispanics represent a large percentage of those in methadone programs compared to their overall proportion of the treatment population - 16 percent vs 6 percent (latter estimate is unstable).

Gender

- o About three-quarters of those in treatment are male and one quarter are female. This ratio is consistent across the major treatment types. However, about one third of those in methadone treatment are female.

Education

- o Forty-one percent of those in treatment have not completed high school.
- o About 30 percent of those in treatment have a high school diploma as their highest degree.
- o An additional 21 percent have some education beyond the high school level, including the 4 percent who have completed college.
- o Educational attainment is unknown for the remaining 8 percent of clients.

Criminal Justice System Status

- o Fifty percent of those in treatment have been arrested prior to admission to treatment (for offenses other than DWI/DUI), while 32 percent have had a DWI/DUI arrest.
- o Thirty-one percent of those in treatment have been in jail or prison.
- o About one-quarter of those in treatment are there as a condition of probation or parole.

Chronic Medical Conditions

- o Twenty-three percent of all clients had chronic medical conditions at admission.

History of Psychological Disorders and Documented Dual Diagnosis Clients

- o More than 18 percent of clients had a history of a psychological disorder at admission.
- o About 13 percent of all clients had a documented dual diagnosis of substance abuse and mental illness at admission. Nine percent had a dual diagnosis at discharge.

HIV/AIDS Status

- o For 85 percent of all clients, HIV/AIDS status was unknown or not stated in the record.
- o Positive HIV test results were reported for only about 1 percent of clients in drug or drug and alcoholism treatment, while negative HIV test results were reported for only about 8 percent of all clients (estimate unstable).

Pregnancy Status

- o About 4 percent of female clients were known to be pregnant at admission. The pregnancy status of 53 percent of all female clients at admission could not be determined from the client record.

Clients in Alcohol Only Treatment

- o Sixteen percent of clients in treatment at facilities sampled for DSRS were receiving treatment for alcohol abuse only and had no reported history of abusing illicit drugs.
- o Clients with histories of alcohol abuse only tend to be older, more often male, and to be more frequently referred to treatment from the criminal justice system than drug and combined drug/alcohol clients.

History of Drug Abuse and Prior Treatment

Prior Drug Treatment History

- o Among clients in all treatment types, 53 percent had a recorded history of previous episodes of substance abuse treatment. More than three quarters of clients in methadone treatment (78 percent) had a history of previous substance abuse treatment.
- o The average number of recorded treatment episodes in the 12 months prior to admission was 1.4 episodes per client for the clients with prior treatment. There was little variation in this average across treatment types.
- o The average number of recorded treatment episodes at any time prior to admission was 2.3 episodes per client for the clients with prior treatment. Clients receiving methadone treatment had the highest average of 3.4 prior treatment episodes.
- o Clients had prior histories of drug treatment spanning an average 3.3 years. Clients receiving methadone treatment had a prior history of drug treatment spanning an average 5.9 years.

Drug or Drug and Alcohol Abuse (Presenting Problem at Admission)

- o Multiple substance abuse (use of alcohol and one or more illicit drugs or use of multiple illicit drugs) is common (52 percent) among those entering treatment.
- o Methadone treatment programs treat a substantial proportion of clients (38 percent) with only a single abused drug at admission but even in this case the majority of clients (58 percent) are multiple substance abusers.
- o Alcohol abuse is closely associated with the abuse of other substances. Among all clients, 71 percent of clients had alcohol abuse listed as a problem at admission to treatment. The presenting problem at admission for 29 percent of clients was alcohol abuse only while an additional 42 percent of clients abused alcohol along with other drugs.

Drug Use Within 30 Days Prior to Admission

- o Nineteen percent of clients had no drug use reported in the client record for the 30 days prior to admission.

- o Alcohol is the most commonly used substance recorded for the 30 days prior to admission. Among all clients, 61 percent reported alcohol use.
- o Nearly a third of clients, 31 percent, abused cocaine or crack in the 30 days prior to admission. Thirty-nine percent of those in methadone treatment abused cocaine in the 30 days prior to admission.
- o Opiate use, such as heroin, non-treatment methadone, or other opiates or synthetic opiates, was reported for 12 percent of clients during the 30 days prior to admission.
- o Marijuana, hashish, or THC use was reported for 26 percent of clients during the 30 days prior to admission. A relatively small group of methadone clients (11 percent, estimate unstable) used marijuana prior to admission.

Intravenous Drug Use (IVDU)

- o Nearly one-half (48 percent) of all client discharge records either had no mention of the clients' intravenous drug use (IVDU) history, at admission or at any past time (ever), or did not provide a clear indication of the clients' IVDU status. However, only 10 percent (estimate unstable) of clients in methadone treatment had no mention of IVDU history.
- o Twenty percent of total clients are reported to have ever used IV drugs. Eighty-five percent of clients in methadone treatment were reported to have ever been IVDUs. About 13 percent of outpatient drug free clients were IVDUs.
- o Of those clients who were reported to have ever used IV drugs, about 6 percent (estimate unstable) were reported to have tested positive for HIV infection. This is almost 5 times the reported HIV-infection rate for all clients in treatment.

Treatment Characteristics

Substance Abuse Testing

- o Approximately 43 percent of all clients were tested for substance abuse during treatment. Nearly double this percentage (84 percent) were tested in methadone treatment while only 26 percent were tested in outpatient drug free treatment.

Services Received in Treatment

- o The treatment services most commonly received by a majority of clients were individual counseling (80 percent), group counseling (70 percent), and self-help groups (54 percent).
- o Group counseling was most common for clients in combination (93 percent) and residential treatment (84 percent) but much less typical for clients in methadone treatment (23 percent, estimate unstable).
- o Self-help groups were reported for more than two-thirds of clients in residential (71 percent) and hospital inpatient (69 percent) treatment but for only 14 percent (estimate unstable) of clients in methadone treatment, consistent with the drug-free philosophy of most self-help groups.

Characteristics of Methadone Treatment

- o Based on the Phase II sample of discharged client records, an estimated 5 percent of clients in treatment received methadone. Most methadone clients (71 percent) received treatment in an outpatient setting.
- o Ninety-one percent of clients received methadone in a single daily dose upon beginning treatment, while 98 percent were receiving methadone in a single daily dose upon ending treatment.
- o Almost a third of methadone clients (33 percent, estimate unstable) received methadone to take away from the treatment site.
- o The average length of methadone treatment (first methadone treatment to last methadone treatment) was 298 days (estimate unstable). It was 10 days for the 27 percent of clients receiving methadone as hospital inpatients and 407 days (estimate unstable) for those in outpatient treatment.

Discharge Characteristics

Length of Stay

- o Average length of stay (admission date to discharge date) ranged from a low of 24 days for hospital inpatient clients to a high of 321 days for methadone treatment clients (estimate unstable). Outpatient drug free clients had an average length of stay of 178 days.

- o The large sampling error for the length of stay estimate for methadone treatment clients (105 days) indicates that these clients have an extremely wide range of stay in treatment.

Dual Diagnosis of Substance Abuse and Mental Illness at Discharge

- o Nine percent of all clients had a documented diagnosis of substance abuse and mental illness (dual diagnosis) at discharge.
- o The percentage of dually diagnosed clients at discharge was highest in hospital inpatient settings (20 percent, estimate unstable) and lowest in residential and methadone treatment settings (5 percent for each, both estimates unstable). However, all of these estimates had coefficients of variation of 0.3 or higher and should be interpreted with caution.
- o The records of 39 percent of all clients had no mention of the presence or absence of a dual diagnosis at discharge.

Completion of Treatment and Reasons for Discharge

- o About half (48 percent) of all clients completed treatment as planned. Sixty-two percent of residential clients completed a planned course of treatment, 58 percent of hospital inpatient clients completed treatment, and 54 percent of alcohol only clients completed treatment.
- o Outpatient drug-free clients and methadone treatment clients were less likely to complete treatment, 24 percent and 32 percent, respectively.
- o Client choice was the most frequent reason for leaving treatment before completion (30 percent of all discharges).
- o Clients were most likely to leave by their own choice from outpatient drug free settings (53 percent) and methadone treatment (40 percent), and less likely to leave residential or hospital inpatient settings by their own choice (19 and 15 percent, respectively).
- o About 5 percent of clients ended the episode of treatment through referral during treatment to another program.

Post-Treatment Referrals

- o More than a third of clients (36 percent) were referred for further treatment after discharge. Hospital inpatient clients were the most likely to be

referred (60 percent were referred), about half of those to outpatient drug free (29 percent).

- o Fourteen percent of all clients were referred to outpatient treatment other than methadone maintenance. Only 1 percent of referrals were to outpatient methadone maintenance treatment.

Treatment Charges

Primary Source of Payment

- o Among the most frequently reported primary sources of payment expected at admission were self-pay (23 percent), private health insurance including HMO's and other prepaid plans (23 percent), and Medicaid (13 percent).
- o Clients who were classified at admission as primarily self-pay accounted for 42 percent (estimate unstable) of clients in public facilities and 15 percent of clients in private non-profit facilities.
- o Private health insurance as the expected primary source of payment varied from 6 percent (estimate unstable) among public facilities to 22 percent among non-profit facilities to 69 percent among for-profit facilities.
- o Medicaid as the expected primary source of payment varied from 5 percent (estimate unstable) of clients in for-profit facilities to 14 percent in non-profit facilities.
- o The most frequent expected source of payment for clients in hospital inpatient treatment was private health insurance including HMO's and other prepaid plans (48 percent); self-pay was the most common source of payment for clients in residential (26 percent, estimate unstable), methadone (31 percent, estimate unstable), outpatient drug free (30 percent) and alcohol only treatment (27 percent, estimate unstable).

Billing

- o Billing information was abstracted for 60 percent of all clients.
- o Methadone clients had the highest percent of unobtainable charge data (74 percent).
- o About 34 percent of all clients were charged the full amount of their accrued charges.

- o Sliding fee arrangements were used for 14 percent of clients (estimate unstable).
- o Six percent of clients were not billed for their treatment (estimate unstable).
- o Large sampling errors indicate great variability in the charge data.

Estimates for Clients Billed for the Full Amount of Treatment

- o Estimated mean and median charges were highest for hospital inpatient treatment clients billed the full amount, \$7,032 and \$6,634, respectively, and mean per diem charges were \$476.
- o Estimated mean and median charges for clients billed the full amount in residential treatment were \$3,108 (estimate unstable) and \$5,073, respectively.
- o Mean total billed charges for clients in alcohol only treatment were estimated to be \$1,414 (estimate unstable), with median charges about half this amount at \$750 and mean per diem charges of \$92 (estimate unstable).
- o Estimates for methadone clients are unstable and should be interpreted with caution.

Estimates of Client Charges for Those Completing and Not Completing Treatment

- o Mean and median charges were higher for clients who completed planned treatment than for those who did not.
- o For hospital inpatient clients billed any amount, median total billed charges were about 2.4 times higher for clients who completed treatment than for those who did not complete treatment (\$9,413 vs \$3,883, respectively).
- o Median charges were about 6 times higher for residential clients billed the full amount who completed treatment than for those who did not (\$6,143 vs \$1,000, respectively), but about twice as high among outpatient drug free clients who completed treatment than for those who did not (\$795 vs \$385, respectively).

TABLE OF CONTENTS

1. Introduction	1
1. Background	1
2. Organization of Report	3
2. Methodology	4
1. Instrument Development	4
2. Sampling Design	5
3. DSRS Phase II Response Rates	8
4. The Quality of the Client Discharge Records	11
5. Development of the Treatment Type Variable	13
6. Sampling Weights	16
7. Sampling Errors	19
8. Clients in Treatment Only for Alcohol Abuse	20
3. DSRS Client-Data Findings	22
1. Client Entrance into Drug or Drug and Alcoholism Treatment	23
1. Primary Sources of Referral: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities	23
2. Waiting Times Reported in Client Records: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities	25
2. Characteristics of Clients in Treatment	26
1. Demographic Characteristics	26
1. Age	26
2. Race/Ethnicity	28
3. Gender	29
4. Education	29
2. Criminal Justice System Status: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities	30
3. Medical and Psychosocial Characteristics	34
1. Chronic Illness	34
2. Dual Diagnosis Clients	35
3. HIV Status of Clients	35
4. Pregnancy Status of Female Clients	35

TABLE OF CONTENTS (continued)

3. Clients' History of Drug Abuse and Prior Drug Treatment	36
1. Prior Drug Treatment History	36
2. Patterns of Drug or Drug and Alcohol Problems	37
3. Types of Drug Used 30 Days Prior to This Treatment	38
4. Intravenous Drug Use (IVDU) Characteristics	41
4. Treatment Characteristics	42
1. Drug Testing in Treatment	42
2. Services Received in Treatment	43
3. Characteristics of Methadone Treatment	45
5. Discharge Characteristics	48
1. Length of Stay	48
2. Clients with a Dual Diagnosis at Discharge	49
3. Reasons for Discharge	50
6. Treatment Charges	51
1. Primary Source of Payment: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities	52
2. Characteristics of Billed Charges	54
3. Mean, Median, and Mean Per Diem Statistics for Billed Charges: For All Clients and For Clients Completing Planned Treatment and Clients Not Completing Treatment	56
7. Post-Treatment Referrals	61

Appendixes

I. Glossary

II. Tables

 List of Tables

 Tables

III. Methodological Memoranda

1. INTRODUCTION

This report presents results from the Phase II client-level segment of the 1990 Drug Services Research Survey (DSRS) sponsored by the National Institute on Drug Abuse (NIDA). The DSRS client-level data are collected from a stratified sample of 118 drug and combined drug and alcohol treatment facilities, sampled from 1,111 non-correctional facilities that completed the DSRS mail/telephone survey in the summer of 1990. Data reported upon here were abstracted from 2,182 records of clients discharged during the 12 months between September 1, 1989 and August 31, 1990. The objective of the DSRS client study has been to collect data describing the characteristics of clients in drug treatment facilities in more depth than has been possible with previous national surveys.

1.1 Background

Many gaps exist in understanding the drug abuse treatment system, as discussed in President Bush's National Drug Control Strategy (White House, September 1989 and January 1990). The Office of Management and Budget (OMB) and the Office of National Drug Control Policy (ONDCP) called for new information to be collected which would provide more detailed data about the drug treatment system. DSRS was undertaken in order to address many of these gaps. NIDA contracted with the Bigel Institute for Health Policy of the Heller School at Brandeis University to design, direct and analyze DSRS. The subcontractor for gathering the field data was Westat Corporation.

The research objective of the DSRS client data collection was to closely examine client records for information about the experiences and characteristics of clients recently

discharged from treatment. The research focused on client entry into drug or combined drug and alcoholism treatment; a description of clients recently in treatment; documentation of treatment services; discharge characteristics of clients; post-treatment referral information; and documented treatment charges. In this report, information is presented for all discharged clients combined as well as for clients within hospital inpatient, residential, methadone, and outpatient drug free treatment types. The policy issues addressed include access to treatment; the treatment characteristics of pregnant women, intravenous drug users, HIV-positive clients, methadone clients, and dual diagnosis clients; services and length of stay; and the costs of drug and drug and alcoholism treatment.

Data from DSRS will supplement information which is periodically collected through NIDA's National Drug and Alcoholism Treatment Unit Survey (NDATUS). NDATUS collects information for the universe of reporting treatment facilities regarding their scope, utilization and other facility and client characteristics, while the DSRS has collected current facility-level data and more in-depth information from a sample of clients discharged over a 12-month period from a sample of facilities that had responded to the 1989 NDATUS.

DSRS encompasses a two-phase research design. The first phase of DSRS, completed August 22, 1990, was a mail questionnaire collected by telephone interview of a stratified random sample of 1,183 drug treatment facilities that were listed on the April 1990 NDATUS Master Unit Identification File. Phase I of the research collected data on the treatment of special populations and the policies and practices of the facilities. The Phase I Final Report presented findings from 1,111 non-correctional facilities. Phase II of the DSRS reported here focuses on client-level data from non-correctional facilities. On-site abstraction of sampled client records was completed between October and December, 1990 at a sample

of 120 facilities that had previously completed Phase I of DSRS. Results presented in this report reflect data abstracted at 118 non-correctional facilities from 2,182 client discharge records. These data provide detailed information on client characteristics as reported in the client records.

1.2 Organization of Report

This report is divided into three chapters. This first chapter provides a brief overview of the genesis of DSRS Phase II and the types of data collected from discharged client records at DSRS drug treatment facilities. The second chapter gives a methodological overview of DSRS Phase II, describing the development of the abstract form, sampling design and weights, response rates by facility sampling strata, the presentation of data for clients in different treatment types, the relationship between facility ownership and client treatment types, and selected characteristics for alcohol only clients contrasted with results for all other drug treatment types combined. The third chapter presents findings based on the sample of discharged client records abstracted for the client-level DSRS study. Each section is organized around a discussion of a series of tables in which an overview of the table is presented followed by highlights of major findings. All tables are based on data weighted to represent clients from facilities that responded to the 1989 NDATUS as of April 1990. It should be noted that the data have not been adjusted for item nonresponse and thus represent underestimates.

Key terms are defined in the Glossary presented in Appendix I and all tables are presented in Appendix II. Memoranda describing sampling and weighting are presented in Appendix III.

2. METHODOLOGY

The Drug Services Research Survey (DSRS) is based on a national, complex survey of 1,183 drug treatment facilities. The Phase II client data segment of DSRS is based on a sample of 120 facilities, site-visited from October to December, 1990. This Phase II report presents results from 2,182 abstracts of discharged client records sampled at 118 of these 120 facilities. Two of the 120 sampled facilities were excluded because one was an alcohol only facility and one was a correctional facility.

2.1 Instrument Development

The DSRS Steering Group, convened by NIDA, developed the first draft of the abstract form. Brandeis worked with Westat to complete the abstract form and to develop a half-hour administrator interview. All forms and procedures were pilot-tested at 20 facilities selected from four states. After revisions to the data collection instrument, 24 experienced abstractors were trained in the DSRS client data collection procedures. In most cases, one abstractor visited a participating facility to conduct the administrator interview and abstract 20 client records. The abstractor completed a half-hour administrator interview, compiled a 12-month list of discharged clients, randomly selected 21 charts (one as an alternative if another of the 20 could not be abstracted), and completed up to 20 abstracts. To implement quality control procedures, two abstractors visited selected facilities, independently reviewing 9 percent of client charts (206 charts out of 2,182 charts). The administrator interview,

conducted at the beginning of the site visit, confirmed several data items from the DSRS Phase I facility data surveys, and asked additional questions on waiting list policies and availability of programs for special populations. These interviews are not analyzed in this report.

The abstract form averaged 57 minutes to complete per discharge and includes data on the following topics:

- (1) admission and demographic characteristics;
- (2) criminal justice system contact;
- (3) medical history;
- (4) drug use history;
- (5) drug testing during treatment;
- (6) drug treatment history;
- (7) treatment services provided;
- (8) discharge characteristics; and
- (9) billing information.

The following sections present the study sampling design, the response rates achieved, and the quality of client discharge records. A discussion of the development of the major analytic variable, client treatment type, follows. The last sections describe the application of sampling weights to the DSRS Phase II results, the production of client estimates and their generalizability, the use of sampling errors, and clients in treatment for alcohol abuse only.

2.2 Sampling Design

After a pilot test in March and April, 1990, data collection for the DSRS Phase I study began in June, 1990 with a mail/telephone survey of a national stratified random sample of drug treatment facilities. The sample was drawn from the April 1990 Master Unit Identification (MUID) file which is a snapshot of the Substance Abuse Facility Identification

System (SAFIS), the mailing list for the National Drug and Alcoholism Treatment Unit Survey (NDATUS). NDATUS is a voluntary survey which is intended to be a census of all known drug abuse and alcoholism prevention and treatment facilities in the United States. DSRS used an early April 1990 working tape of the MUID file, containing the most recent NDATUS mailing information. Before sampling for DSRS, three groups of facilities were eliminated from the MUID file: prevention only programs, facilities outside the coterminous U.S., and the 100 facilities contacted during DSRS pilot testing of facility and client procedures and instruments. Results of the DSRS mail/telephone survey are presented in an earlier report.¹

The MUID sampling list was divided into six strata. Based upon a plurality of clients in various treatment environment/modalities, 1989 NDATUS facilities as of April 1990 were respondents were assigned to one of five sampling strata: hospital inpatient, residential, outpatient detoxification/maintenance, outpatient drug free, or alcohol treatment only. Facilities on the MUID, but not on the 1989 NDATUS as of April 1990, were assigned to a sixth new/unknown stratum. Random samples of facilities in each stratum were drawn, and 294 facilities from the first four strata were also pre-selected for possible site visits. Facilities assigned to the latter two strata (alcohol only and new/unknown) were excluded from pre-selection for site visits because it was unknown what proportion, if any, offered a drug treatment environment/modality of care in 1990. Information from the DSRS mail/telephone survey was not available to place them in one of the first four strata in time to meet the tight time schedule planned for on-site data collection.

¹Helen Levine Batten, Constance M. Horgan, Jeffrey M. Prottas, Lorna J. Simon, Mary Jo Larson, Elsa A. Elliott, Melissa Bowden. The Drug Services Research Survey of Drug Treatment Facilities: Final Phase I Report. Brandeis University, September 19, 1991.

In each of the four Phase II strata, the sampling goal was 600 discharges from thirty facilities for on-site abstracting of client-based data. Approximately equal-sized samples from each of the four strata were to be drawn, although the populations they represented were different in size. The final weights applied to each abstract account for this disproportionate sampling to ensure the generalizability of the data from the anticipated 2,400 client abstracts to all 1989 NDATUS respondents in the four sampling strata. The rate for assigning facilities to pre-selection status was based on expected eligibility and response rates for these four sampling strata, extrapolated from observations in the facility survey pilot and from response rates to the piloting of the client data procedures.² The sampling rates for (a) facility pre-selection and (b) the final targeted sample of facilities for the client-level data collection are listed below, by stratum.

<u>Stratum</u>	<u>Pre-Selection</u>		<u>Final Targeted Client Sample</u>	
	<u>Sampling Rate</u>	<u>Number of Facilities</u>	<u>Sampling Rate</u>	<u>Number of Facilities</u>
Hospital Inpatient	.130	90	.043	30
Residential	.051	60	.026	30
Outpatient Detox- ification or Drug Maintenance	.122	57	.064	30
Outpatient Drug Free	.029	87	.010	30
Total		294		120

²See Appendix III, Mohadjer memo, January 24, 1991.

2.3 DSRS Phase II Response Rates

Table 1 indicates that of the 10,649 facilities in the DSRS sampling frame, 1,803 were released for the Phase I facility surveys, and completed surveys were obtained from 1,183 eligible facilities by August, 1990.

Of the 294 facilities pre-selected for DSRS Phase II client data collection from the 1989 NDATUS sampling frame, 233 drug programs were located, determined eligible, and had completed the mail/telephone DSRS facility survey. The facility segment of DSRS achieved a higher response rate (82 percent) than had been expected from the Pilot study (70 percent). Thus, the 233 available pre-selected facilities were re-grouped into sampling waves, introducing an additional level of sampling probability. Waves were sorted by the four Phase II sampling strata, and released for the study to request facility participation in a DSRS client site visit. An initial wave of 34 facilities was released for each stratum and then other waves were released as needed to fill the targeted sample size of 30 facilities per stratum.

Only 146 of the available 233 pre-selected facilities had to be released to reach the client sample size target of 120 facilities. Project staff gained permission for site visits to 120 facilities, achieving an overall response rate of 82 percent. The response rate varied by stratum. The highest response rate, 94 percent, was obtained from facilities sampled as residential treatment programs. About three-quarters of the hospital inpatient programs participated, providing the lowest response rate of 73 percent. Outpatient drug free and methadone treatment facilities participated at the 82 percent level. Thus, 29 hospital inpatient facilities, 32 residential facilities, 31 outpatient detoxification/drug maintenance facilities, and 28 outpatient drug free facilities, a total of 120 facilities, gave permission for a

site visit. Data were collected for clients at an alcohol only facility from the hospital inpatient sampling stratum and for clients at a correctional facility from the residential sampling stratum. Data from these 2 facilities are excluded from analysis in this report. Abstracts included in the results are from 118 of the 120 site-visited facilities.

Charts of clients who ended treatment during a specified 12-month period were the final sampling unit in the DSRS Phase II project. A sampling frame of discharged clients was compiled at each facility by the abstractor. Facility staff assisted in compiling discharge sampling frames to insure, as far as possible, the inclusion of clients not completing treatment for any reason, including death. They also assisted with the exclusion of clients treated for alcohol abuse only, those admitted and discharged on the same day, or those discharged without receiving any treatment for substance abuse. The sampling rate for discharges is individual to each responding facility since it is based upon the number of discharges occurring at the facility in the period September 1, 1989 to August 31, 1990. To illustrate, if only 20 clients were discharged from the facility during the twelve-month period, the discharge sampling rate would be 1.0. If there were 2,000 discharges, each abstracted chart would have been sampled at the rate of .01. These discharge sampling rates are one of the probabilities that are included in the final weights.

Several characteristics of the drug treatment milieu affected the size and contents of the final DSRS client sample. These factors intervene to prevent absolute congruence between the design sample size goals and the number of client abstracts available for analysis in the completed sample for each treatment type. First, though designated as a single stratum for sampling purposes, some drug treatment facilities offer more than one environment/modality of treatment. The discharge sampling frames at these facilities could therefore

contribute discharge abstracts to more than one type of treatment. Second, clients discharged from the sampled facilities may have received care from more than one treatment modality, either in sequence or simultaneously during a single admission, thus precluding the assignment of this kind of discharge abstract to only one type of treatment.

The compilation of discharge sampling frames at the facilities was also affected by the reality of delivering drug treatment in the field. The DSRS study objective was to pool abstracts of clients receiving treatment for drug abuse or for combined drug and alcohol abuse. However, very few facilities could exclude a priori from the discharge frame clients receiving treatment only for alcohol abuse. Abstracts of records of 255 alcohol abuse only clients were included in this analysis. Although most facilities were able to exclude from the discharge sampling frame clients treated as co-dependents and clients treated only for mental illness, some could not. Therefore, some charts of ineligible clients were included in the discharge sampling frames; if abstracted, they were excluded from the analysis and from the DSRS data files.

An average of 18.5 abstracts were completed per facility. The desired 20 charts could not be abstracted at all sites for several reasons. Six small and/or re-organized facilities had not produced 20 discharges during the twelve month period. Although a sample of 21 charts (one designated as an alternate) was drawn at each facility, abstracts were not completed for a total of 216 charts. The outcome of abstracting is listed below for all sampled discharges.³

³See Appendix III, Hurwitz memo, January 15, 1991 for further discussion of the abstraction process.

<u>Abstract Status</u>	<u>#</u>	<u>(%)</u>
Record Not Available	48	(2.0)
Duplicate	3	(0.1)
Ineligible	165	(6.8)

<u>Reason for Ineligibility</u>	<u>#</u>
No Treatment Administered*	84
Discharged Outside of Time Frame	42
Client Not Treated for Substance Abuse**	35
Other	4

Abstract Completed	<u>2,222</u>	<u>(91.1)</u>
Total Records		
Attempted to Abstract	2,438	(100.0)
Abstracts Reported Upon	2,182	

*Client was referred elsewhere or never showed up for treatment.

**Client was treated only for mental illness or co-dependence.

As Table 2 shows, among the 2,222 discharges in the DSRS client data set, the number of abstracts per sampling stratum ranges from a low of 487 for outpatient drug free facilities to 615 discharges in programs sampled as residential facilities.

Table 3 displays the number of facilities and clients reported upon here. Although abstracts were completed for 2,222 clients, data for 20 abstracts are excluded from the 571 completed in the hospital inpatient sampling stratum because clients had received treatment at an alcohol only facility; data for 20 abstracts are also excluded from the 615 completed in the residential sampling stratum because these clients had received treatment in a correctional facility, outside the scope of this report.

2.4 The Quality of the Client Discharge Records

Westat abstractors completed facility assessment forms about staff cooperation and

the quality of facility records after each site visit.⁴ Abstractors were asked to subjectively rate facilities using a 5 point scale where 1 represented "well above average" and 5 equalled "well below average." As ratings were based on the subjective impressions of abstractors, these findings should be interpreted with caution. Abstractors found that, overall, facility staff were cooperative. Abstractors received above average cooperation in pulling treatment records at 73 percent of the facilities and above average cooperation in compiling a list of discharges for sampling purposes at 61 percent of facilities.

Abstractors evaluated client records for organization, completeness, and legibility. The ratings show that, overall, the quality of records was rated as above average for about half of the facilities. Organization of records was assessed at well above average for about 17 percent of facilities; completeness was rated as well above average at 14 percent of facilities; and legibility was thought to be well above average at about 10 percent of facilities. About 18 percent of the facilities were rated as below average for completeness of records, and below average ratings were received by 14 percent of facilities for organization and by 13 percent of facilities for legibility.

Evidence of the quality of client records may also be seen in abstract completion rates. As shown in the previous section, of the 2,438 records that abstractors attempted to summarize, 9 percent (216 records) did not result in completed abstracts. About 43 percent of unsuccessful attempts were due to problems with record organization: records were not available (48 records), duplicate records were listed in the discharge sampling frame (3 records), or records were listed with discharge dates outside of the study time frame (42 records). The remaining unsuccessful attempts (57 percent) were the result of clients

⁴See Appendix III, Hurwitz memo, January 15, 1991.

misclassified as receiving drug treatment: in 84 cases, no drug treatment had been administered to a client; in 35 cases the client was not treated for substance abuse; and in 4 cases, records were not eligible for other reasons.

Item-response rates are still another indicator of discharge record quality. If information about certain topics cannot be determined or is not mentioned in client records, item-response rate will be low. Overall, item-response rates were high for data about source of referral (98 percent); demographic data such as age, gender, race/ethnicity, and education (ranging from 94 to 99 percent); and discharge data (98 percent). Item-response rates for history of drug use were variable: response rates for ever used cocaine (74 percent), alcohol (94 percent), or marijuana (78 percent) were fairly high while the response rate for ever having used heroin (46 percent) is rather low. Between three-quarters and two-thirds of facilities had information about clients' criminal justice system status. Client billing information was available for about two-thirds of clients. Abstractors had little success in gathering information about HIV or AIDS status for which data were unknown or not mentioned in about 90 percent of available client records. Pregnancy status also was relatively unavailable: 53 percent of client records were missing this information. Finally, waiting time information was not readily available within the client records.

2.5 Development of the Treatment Type Variable

Data in this report are analyzed by a variable created to examine study findings according to type of treatment received. Although clients had been typed by treatment setting, it was also important to clearly differentiate clients receiving methadone treatment within the outpatient detoxification/maintenance category from those who were being

detoxified for other reasons and to identify those whose treatment was for alcohol only, regardless of their treatment setting.

Regardless of the setting in which they received treatment, clients were designated alcohol only if (a) the presenting problem at admission or principal treatment focus was for alcohol abuse only, and (b) there was no history of ever using any drug other than alcohol.

Thus, 255 clients were classified as alcohol only. Using this definition, 41 clients were identified as alcohol only from the hospital inpatient setting, 27 from residential treatment, 4 from outpatient detoxification/maintenance, 59 from outpatient drug free, 76 from alcohol only, 44 from the combination category indicating clients whose records indicated they had received more than one type of treatment, and 4 whose treatment setting was unknown. Clients (n=44) who had received treatment in an alcohol only setting but had a history of abuse of alcohol and other drugs were categorized as unknown treatment type because these clients had been classified by the abstractors as "alcohol only" and the actual treatment setting variable was not abstracted.

To identify clients receiving methadone treatment, records were scrutinized for receipt of methadone and treatment setting. Of the 253 clients identified as outpatient detoxification/maintenance, 248 had received methadone. Of the remaining 5, 4 met the criteria for alcohol only treatment and were classified into this treatment type and one was reclassified as outpatient drug free. The methadone category (n=292) in the treatment type variable drew 34 clients from hospital inpatient settings, 3 from residential, the 248 clients from outpatient detoxification/maintenance referred to above, and 7 clients from the combination category. This information is displayed in Table 4.

The setting in which clients received services and other characteristics of the clients and their treatment were used to create the treatment type variable. In addition, the facilities from which the client discharges were sampled had originally been placed in one of the four drug treatment modality sampling strata discussed above. Table 5 contrasts this facility descriptor with the client treatment type variable for the 2,182 discharges abstracted for the DSRS client survey. The majority of client records abstracted (64 percent) retained the same treatment type as the sampling stratum from which they were drawn. The actual treatment type most closely reflected sampling stratum designation for clients in residential treatment (76 percent) while hospital inpatient client records (67 percent) and outpatient drug free client records (65 percent) had a reasonable congruence. The least congruent results are seen for clients sampled from the outpatient detoxification/drug maintenance strata (47 percent). Over one-quarter of the detoxification/maintenance discharges were given a treatment type of outpatient drug free.

Four sets of tables in the Findings chapter include a categorization of clients by the ownership status of the facilities providing their treatment. Differences in referral sources, waiting periods, payment sources, and client contact with the criminal justice system are examined by facility ownership. As background, Table 6 in this chapter gives the distribution of client treatment types within the three ownership categories for the 2,182 completed abstracts (data uncorrected for sampling effects). Overall, 1,454 of the abstracts (67 percent) were collected from private non-profit facilities; the remaining abstracts were split nearly equally among public facilities (15 percent) and private-for-profit providers (18 percent). Each ownership type contributed abstracts to each of the client treatment types. The public facilities' abstracts are most commonly from clients in hospital inpatient facilities (28

percent). Nearly one-half of the abstracts collected at private-for-profit facilities are either from the hospital inpatient (23 percent) or outpatient drug free (24 percent) types. The private non-profit client discharges are, on the other hand, more concentrated in the residential (28 percent) as well as the outpatient drug free treatment (24 percent) types. In the next section, these discharge data are weighted to account for the sampling design; the effect of this adjustment upon the percentage distributions is then discussed.

2.6 Sampling Weights

Sampling weights were developed to account for the DSRS sampling design and to represent the contribution of each discharge abstract to the overall sample distribution. The client discharge weights are first calculated using facility weights since facilities are the first unit of sampling. The first stage facility sampling weights, based upon the initial probability of being sampled for inclusion in the DSRS facility survey, were adjusted twice to account for both the overlap with another NIDA survey and for the number of waves released for contact for the facility survey. After the data collection was completed, final facility survey sampling weights were calculated to address the differential response rates of facilities to the facility survey within each stratum. As no information was available on the eligibility status of the facilities that refused or could not be contacted by the DSRS facility survey, an assumption was made that all refusals were eligible for the facility survey and those not contacted were ineligible.

The facility weights from the facility survey were then adjusted for the probability of each of the 120 facilities sampled for inclusion in the client survey being selected from among the eligible DSRS facilities in the first four sampling strata. Adjustment was made to

these weights to account for the number of waves released for solicitation of DSRS client survey participation and the ensuing 18 percent facility refusal rate.

To provide estimates of client characteristics, the base weight for each abstract consists of the final facility weight (described above) and the probability of each discharge being sampled from all records in the discharge sampling frame constructed by DSRS abstractors at each facility. This client abstract sampling weight is adjusted for non-response to the client abstraction process, that is, discharge records that could not be located. Since the eligibility status of the missing records could not be determined, the rate of eligibility observed within each facility for charts reviewed was applied to the missing discharge records. The final adjusted case record weights are calculated so that the sum of the weights adds to a control total of 2,222, the abstract sample size.

Percentage distributions and other statistics presented in the Findings chapter of this report are based on clients and facilities eligible for inclusion in the client segment of the 1990 Drug Services Research Survey. Eligible clients are those that: (a) were discharged from the eligible facilities from September 1, 1989 to August 31, 1990; and (b) received treatment for drug and/or alcohol abuse at that facility. Facilities eligible for the DSRS client survey include only those programs that: (a) were listed on the April 1990 NDATUS MUID mailing list; (b) reported offering drug treatment on the 1989 NDATUS (as of April 1990); and (c) had an allocated budget and assigned program staff offering drug treatment services on March 30, 1990.

The percentage distributions and other statistics presented in this report are adjusted for facility non-response, i.e., facilities sampled for DSRS that refused to participate;

adjustment is also made for client record non-response, i.e., discharge records that could not be located. The percentages are not, however, adjusted for item non-response, i.e., answers to specific abstract variables that could not be found in the discharge record or that contained unclear information. One of the major objectives of the DSRS client survey was to measure the availability, in drug treatment client charts, of many of the data items on the client abstract form. The percentage "unknown/not mentioned" is therefore included in most tables as a separate category for the variable(s) analyzed.

Application of the sampling weights is a critical analytic step given the disproportionate nature of the sampling of facilities and discharged clients in the DSRS client survey. The effect of the sampling weights is illustrated by the data in Table 7, which includes the client abstracts from Table 6, now weighted to account for the DSRS sampling design. The distribution of clients shifts substantially across the client treatment types from the unweighted abstract counts. The percentage of all clients receiving methadone falls from 13 percent of the completed abstracts to only 5 percent of clients discharged from treatment in all facilities eligible for the DSRS client survey. The percentage of clients in outpatient drug free treatment increases from 23 percent of completed abstracts to 27 percent of all clients; similarly, the percentage of clients in alcohol abuse only rises from 12 percent of abstracts to 16 percent of clients in DSRS Phase II eligible drug treatment facilities.

Parallel changes for the distribution of clients across treatment types are seen within each of the major categories of facility ownership status. The effect of adjusting for sampling among discharge frames of different sizes is illustrated by the change in the contribution of the facility types to the total estimated percentage of clients. Public facilities were responsible for only 15 percent of the completed abstracts, but, when adjusted, have 29

percent of all discharged clients. The percent contribution from each of the private facility categories drops such that 12 percent of all clients are discharged from private-for-profit facilities reporting drug treatment in the 1989 NDATUS (compared to 18 percent unweighted) and 59 percent are discharged from private non-profit facilities (compared to 67 percent unweighted).

2.7 Sampling Errors

Since DSRS is based upon sample data, the estimated percentages of discharged drug treatment clients are subject to sampling error. Each table in Chapter 3 has statistics derived from the final DSRS client data, weighted to account for the sample design. Each percentage and mean is accompanied by its sampling error. To determine the range of the 95 percent confidence interval for each percentage or mean, multiply the reported sampling error by 1.96; subtract this product from the percentage or mean for the lower confidence limit and add the product to the percentage or mean for the upper confidence limit.

All percentages and means have an indication of the size of the sampling error and its interpretation. The Coefficient of Variation has been calculated for the size of the sampling error relative to each percentage or mean. The Coefficient of Variation (C.V.) is computed by dividing the sampling error by its percentage or mean. All percentages, means, and medians with a C.V. of greater than or equal to 0.3 have an asterisk (*) to indicate the underlying instability of the statistic. Unstable estimates are shown in the tables but, in most cases, are not cited in the Findings chapter because of their large coefficients of variation. The sampling errors and coefficients of variation for this report were produced using WESVAR, a software package designed to produce standard errors for statistics based on data from complex sample survey designs.

2.8 Clients in Treatment Only for Alcohol Abuse

In arraying clients by type of treatment received, the previous discussion of data in Table 4 compares clients receiving treatment only for alcohol abuse with each other treatment type category. It is also important to note differences between clients in treatment for alcohol abuse only with clients in treatment for the abuse of drugs or combined drug and alcohol abuse observed in this national sample of facilities providing substance abuse treatment. Alcohol only clients account for 12 percent of clients (unweighted) in treatment at the drug or drug and alcohol combined facilities sampled for DSRS.

Selected client characteristics for clients whose presenting problem at admission was alcohol abuse only and with no reported prior history of abusing illicit drugs are compared in Table 8 to characteristics of clients treated for drug or combined drug and alcohol abuse. The demographic characteristics of drug treatment clients differ from alcohol only clients along the parameters of age and gender. Clients receiving drug treatment are generally younger and slightly more likely to be female than alcohol only treatment clients. Referral patterns also differ. According to their client records, drug treatment clients are more often self-referred whereas the criminal justice system plays a much larger role in initiating treatment for alcohol only clients. Compared to drug treatment clients, alcohol only clients are almost twice as likely to have a DWI or DUI arrest prior to admission, and one and a half times as likely to be receiving treatment as a condition of probation or parole (36 percent vs 22 percent, alcohol estimate unstable). However, drug treatment clients had a much higher percent of unknown/not mentioned in their records on these two items.

Among the dimension of physical health, alcohol only clients are only slightly more likely to have a chronic medical condition reported in their records than drug treatment clients (25 percent vs 23 percent). However, drug treatment clients are twice as likely to

have a dual diagnosis of substance abuse and mental illness recorded at admission than alcohol only clients (14 percent vs 7 percent, estimate unstable).

While there are no positive reports of HIV infection or diagnosed AIDS among the alcohol only clients, as compared to about 2 percent for drug treatment clients, the high percentage of clients with unknown HIV status, along with the instability of most of the estimates, makes this information very tenuous. Finally, alcohol only clients are much more likely to have reported using alcohol in the 30 days prior to admission than drug treatment clients (81 percent vs 57 percent).

Table 9, which displays information about selected treatment characteristics, indicates there are few differences in the services alcohol and drug treatment clients receive. The one exception is that drug treatment clients are much more likely to have substance abuse testing reported in their records than are alcohol only clients (45 percent vs 31 percent, estimate unstable). Discharge characteristics differ slightly in that while about 47 percent of drug treatment clients complete treatment, nearly 54 percent of clients in treatment for alcohol only complete planned treatment.

Length of stay is longer for alcohol only clients than for drug treatment clients, both when measured by average length of stay (132 days vs 105 days) and by median length of stay (64 days vs 47 days). However, reported treatment charges are higher for drug treatment clients, averaging \$3,143 for drug treatment clients billed the full amount compared to \$1,414 (estimate unstable) for alcohol only clients. There are no major differences in primary source of payment reported in clients' records for alcohol and drug treatment clients.

3. DSRS CLIENT - DATA FINDINGS

The findings chapter is organized into seven sections. In the first section, client entrance into drug or drug and alcoholism treatment, primary sources of client referral and client waiting times are discussed. Characteristics of clients in treatment are discussed in section two, including demographic attributes; criminal justice system status; and medical and psychosocial characteristics (chronic illness, dual diagnosis, HIV status, and pregnancy status). Section three contains findings regarding clients' history of drug abuse, including intravenous drug use (IVDU), and prior drug treatment. Treatment characteristics are presented in section four, encompassing drug testing in treatment, services received in treatment, and characteristics of methadone treatment. Section five examines discharge characteristics such as length of treatment and reasons for discharge. The charges for treatment are analyzed in section six; and post-treatment referrals are presented in the final section of the chapter. All findings, except for characteristics of methadone treatment, are presented for all clients combined and for clients by treatment type, classified by hospital inpatient, residential, methadone, outpatient drug free, alcohol only, combination of two or more treatment types, or unknown treatment type. All clients receiving methadone services have been categorized into the methadone treatment type.

3.1 Client Entrance into Drug or Drug and Alcoholism Treatment

Two indicators of access to drug treatment are referral sources and waiting time for admission to treatment. Primary sources of referral to the current treatment facility are discussed in this section for the total DSRS client data and by type of facility ownership. In addition, DSRS results on the frequency and duration of waiting, as reported in client records are presented for all clients and by facility ownership status.

3.1.1 Primary Sources of Referral: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities

Clients enter drug treatment through a variety of mechanisms. Table 10 shows that the largest group of clients enter treatment according to their records by self-referral (27 percent) or through the criminal justice system (26 percent). Fourteen percent are referred by health care providers, and 11 percent come from other treatment programs.

Clients in methadone treatment and hospital inpatient treatment are considerably more likely to be self-referred (53 percent and 43 percent) than clients in residential (22 percent), outpatient drug free (20 percent), and alcohol only treatment (21 percent, estimate unstable). Clients in alcohol only and outpatient drug free treatment are more likely to be referred by the criminal justice system (37 percent and 36 percent, respectively) than are clients in other types of treatment.

Clients in publicly-owned facilities are nearly equally likely to be self-referred (27 percent, estimate unstable), referred from the criminal justice system (26 percent, estimate unstable), or referred from health care providers (26 percent) (Table 11). The percentage of clients in publicly-owned facilities with referrals from health care providers (26 percent) is

substantially higher than in private for-profit facilities (6 percent, estimate unstable) or private non-profit facilities (10 percent).

For clients receiving treatment in private for-profit facilities, there are some striking differences (Table 12). Clients are most likely to be self-referred to treatment (24 percent), referred by Employee Assistance Programs (16 percent, estimate unstable), or other treatment programs (15 percent, estimate unstable). Compared with clients in publicly-owned facilities, the criminal justice system and health care providers are a much less likely source of referral.

Sources of referral for clients in private non-profit facilities are similar in some respects to those for clients in private for-profit facilities and similar in other respects to sources of referral for clients in publicly-owned facilities (Table 13). The criminal justice system is a major referral source for clients in private non-profit and publicly-owned facilities (30 percent and 26 percent, respectively), but a less important source of referral in private for-profit facilities (7 percent). Health care providers are less important sources of referral in private non-profit facilities (10 percent) and private for-profit facilities (6 percent, estimate unstable), compared with publicly-owned facilities (26 percent). In all three types of facilities, self-referral is a major source of referral.

- o The four primary sources of referral for all clients in treatment are clients themselves (27 percent), the criminal justice system (26 percent), health care providers (14 percent), and other treatment programs (11 percent).
- o Clients in hospital inpatient treatment are most likely to be self-referred (43 percent) and less likely to be referred by the criminal justice system (9 percent).
- o Clients in residential treatment are most likely to be self-referred (22 percent). They are less likely to be referred from the criminal justice system (21 percent) than clients in outpatient drug free treatment (36 percent) or alcohol only treatment (36 percent).

- o The majority of clients in methadone treatment are self-referred (53 percent). Other estimates of referral source for methadone clients are unstable.
- o The most frequent source of referral for clients in outpatient drug free treatment is the criminal justice system which was the referral source for more than a third of these clients (36 percent). Twenty percent of clients were self-referred, compared to 43 percent of hospital inpatient clients or 53 percent of methadone clients.
- o Referral sources vary by type of facility ownership. Self-referral is equally prevalent to facilities that are public, private-for-profit, and private-non-profit, with between 24 and 28 percent of clients self-referred. However, health providers are more frequent sources of referral of clients to public facilities (26 percent). Families (12 percent), and employers and Employee Assistance Programs (21 percent combined) are more common sources of referral to private-for-profit facilities while the most frequent referral source for clients to private-non-profit facilities is the criminal justice system (30 percent).

3.1.2 Waiting Times Reported in Client Records: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities

Abstractors were asked to record the time clients had to wait between the time they applied for treatment and the date they were admitted. Table 14 reports the percentage distribution of waiting time for all clients admitted into treatment. Tables 15, 16 and 17 report the distribution of waiting time for clients in public, private for-profit, and private non-profit facilities, respectively.

For 40 percent of all clients, waiting time status was unknown or not mentioned in the client's record. Fifty percent of clients had records which indicated no wait time. Thus, only 10 percent of all clients were known to have had any waiting time at all. For those 10 percent of clients, who had a waiting time other than zero recorded, their average wait was 17 days (data not shown).

- o Only 10 percent of all clients had any waiting time reported. Four percent waited less than 1 week. For this 10 percent of clients who had to wait for admission (n=218; data not shown), the average waiting time was 17 days.
- o For forty percent of all clients, the waiting time between application and admission was not mentioned in the client record. Waiting time was most likely to be unknown or not mentioned in records of clients admitted into residential treatment (56 percent).
- o Fifty percent of all clients had no wait reported between the time they applied for treatment and the time they were admitted into the program. The highest percentage of clients with no recorded waiting time were admitted into hospital inpatient treatment (73 percent).

3.2 Characteristics of Clients in Treatment

The percentage distributions of age, race/ethnicity, gender, and educational attainment are discussed below under demographic characteristics of drug treatment clients. Four dimensions of possible client contact with the criminal justice system are detailed for all clients and by ownership status of the treatment facilities. The prevalence of a number of medical and psychosocial client characteristics were abstracted by DSRS. Results are presented in Table 27 for presence of chronic illnesses, the reporting of a dual diagnosis, the HIV status of clients, and the pregnancy status of female clients at admission to treatment.

3.2.1 Demographic Characteristics

3.2.1.1 Age

Table 18 presents the age distribution of clients in treatment for drug abuse. As this table indicates, the age distribution of those in treatment is skewed toward youth when compared to the distribution of the U.S. population as a whole. In particular the age group 25-34 is over-represented in the treatment population. Only about 18 percent of the American population falls into this category but 43 percent of those in treatment are between

the ages of 25-34. The age groups 18-24 and 35-44 are also over-represented but not to the same degree.⁵ These groups represent, respectively, 17 percent and 23 percent of those in treatment.

There are differences among treatment types in terms of client age. The youngest mix of clients is in outpatient drug free programs. About 10 percent of clients are less than 18 years of age (estimate unstable) and 34 percent are under 25. Methadone treatment clients represent the oldest population mix, and those in drug treatment in hospital inpatient facilities are also a bit older than the average.

- o The percentage of 25-34 year old clients in drug treatment is almost two and a half times their percentage of the national population.
- o Eighteen to 24 year old and 35 to 44 year old clients are also over-represented. In both cases their proportion of the treatment population is about 150 percent of their proportion of the general population.
- o Only about 6 percent of those in treatment are under 18 years of age.
- o There are no methadone treatment clients under 18 years of age. Almost 46 percent of methadone clients are 35 or older.
- o About 79 percent of those being treated in outpatient drug free settings are under 35 years of age and 10 percent are under 18 (estimate unstable).
- o Almost one half of those in residential programs are between 25 and 34 years of age.

⁵People 18-24 years of age are about 10 percent of the U.S. population and those 35-44 are about 15 percent of the population (Statistical Abstract of the U.S., 1988, Bureau of the Census).

3.2.1.2 Race/Ethnicity

Table 19 presents the distribution of race/ethnicity of the population in drug treatment. Almost 60 percent of those in treatment are non-Hispanic whites. Blacks are heavily over-represented in the treatment population: almost 29 percent of those in treatment are black compared with only about 12 percent⁶ of the U.S. population.

Table 19 shows that there are differences across treatment facility types in terms of the race and ethnicity of the clients they serve. Non-Hispanic whites are treated more often in hospital inpatient treatment (69 percent vs 60 percent), and less likely to be receiving methadone treatment (50 percent vs 60 percent). Blacks are most heavily represented in residential treatment facilities (37 percent) and are also a large proportion of those in methadone treatment (32 percent). The percentage of Hispanics in methadone treatment (16 percent) is high relative to their percentage of the treatment population (6 percent, estimate unstable).

- o The majority of clients in every drug treatment type are non-Hispanic whites.
- o Whites represent 69 percent of those in hospital inpatient treatment and 61 percent of all those in treatment in residential or outpatient drug free facilities. They represent half of those in methadone treatment facilities.
- o Blacks are heavily over-represented in the drug treatment population when compared to the general population (29 percent vs 12 percent).
- o Thirty-seven percent of those in residential programs are blacks, as are 32 percent of those in methadone programs.

⁶Statistical Abstract of the U.S., 1988, Bureau of the Census.

- o Hispanics represent a large percentage of those in methadone programs compared to their overall proportion of the treatment population - 16 percent vs 6 percent (latter estimate statistically unstable).

3.2.1.3 Gender

Table 20 indicates the gender of those receiving treatment for drug abuse. It shows that three-quarters of those in treatment are male and one-quarter are female. This ratio is quite consistent across the major treatment types. However, one-third of those in methadone treatment are female.

3.2.1.4 Education

Both Table 21 and Table 22 present the educational levels of clients in treatment for drug abuse. Table 22 expands upon Table 21 by providing a more detailed breakdown of level of education, doubling the number of categories listed in Table 21. Because this decreases the number of cases in each cell, it also decreases the stability of the estimates presented.

It can be seen in Table 21 that approximately 41 percent of clients had not completed high school at the time of admission into treatment. However, it should be noted that 7 percent of those in treatment are under 18 years of age (Table 18) and an additional 5 percent are 18 or 19 years of age (data not shown), many of these groups being too young to have completed high school. Outpatient drug free facilities in particular serve a young population - 10 percent of their patients are under 18 (estimate unstable).

About 47 percent of clients had high school as the highest level of education at the time of admission, when the 17 percent with "some college" are included (Table 22). About

4 percent of clients had completed college (2.8 percent college graduates plus 1.4 percent with post-graduate work).

- o Forty-one percent of those in treatment have not completed high school.
- o About 30 percent of those in treatment have a high school diploma as their highest degree and an additional 17 percent have had some college courses without having graduated from college.
- o Four percent of those in treatment have a college degree.
- o Comparison across treatment types cannot readily be made because the younger clients, more prevalent in outpatient drug free treatment, may not have finished high school due to their youth.

3.2.2 Criminal Justice System Status: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities

The tables in this section provide data on four aspects of the criminal justice history of those in treatment. Prior DWI/DUI arrests indicate a prior connection between substance abuse and contact with the criminal justice system. Other types of arrest prior to admission show encounters with the criminal justice system, but these are not necessarily in connection with drug involvement. The third kind of information reported is incarceration. In this instance, the criminal activity led to imprisonment. Finally, these tables indicate whether the client is actually in treatment as a condition of probation or parole. This provides an unambiguous link between drug use and criminal activity.

Table 23 provides these data for the entire sample, Tables 24-26 present the same data for sub-samples based on ownership of the facilities. Table 24 provides the information for publicly-owned facilities, Table 25 for private for-profit facilities and Table 26 for private non-profit. The last is, by far, the largest segment of the sample.

For almost all of these data there is a large "unknown/not mentioned" category of criminal justice history. For all clients the percentage of unknown history ranges from 23 percent for "other arrests prior to admission" to 34 percent for "prison or jail record prior to admission." The percentage of "unknown/not mentioned" is very much higher in some individual cells. The percentage with prior history is likely to be an underestimate because many facilities do not maintain this type of information in their treatment records. It is difficult to estimate the proportion of clients for whom no mention of a criminal event indeed means there was no prior criminal history.

In the overall sample, 32 percent of clients have at least one prior DWI/DUI arrest on their record and 36 percent are known not to have such an arrest. There is variation among the major drug treatment types. Only 3 percent of those in methadone treatment (estimate unstable) were known to have a prior DWI/DUI arrest. However, the large "unknown" category and the long duration of methadone treatment make comparison to this treatment type difficult. More than half of clients in alcohol only treatment (53 percent) have at least one prior DWI/DUI arrest mentioned in their records.

A very high percentage of clients have a prior history of arrest other than DWI/DUI. About half have such an arrest history mentioned in their records - about one-quarter are known not to have such a history. Those in residential treatment or methadone treatment are more likely to have such a history (61 percent and 64 percent, respectively) than are those receiving treatment in other modalities. Clients in alcohol only treatment are the least likely to have a prior arrest record (27 percent), other than DWI/DUI arrests.

About 31 percent of all clients in the sample are known to have been incarcerated while 36 percent are known not to have been. There are no data in facility records on the

remaining clients. Clients in residential treatment have the highest percentage of those with a prison or jail record (45 percent), while clients in alcohol only treatment have the lowest percentage (16 percent). The percentage of those known not to have a prison record is about the same throughout, except for clients in alcohol only treatment where 48 percent are known not to have a prison or jail record prior to admission.

Finally, about a quarter of clients are actually in treatment as a condition of parole or probation. As this is information that is very likely to be in records we may reasonably assume that, in this case, the "not mentioned" category represents those not in treatment under judicial constraint. About 37 percent of those in outpatient drug free treatment are there under some form of court order. Relatively few clients in methadone treatment or in hospital inpatient treatment fall into that category.

As Tables 24 through 26 show, the populations served by public facilities and those served by private non-profit facilities are very similar on these criminal justice related criteria. The greatest difference lies in the percentage of clients with prison or jail records. About 36 percent of clients in private non-profit treatment programs have such a record as opposed to only 25 percent of those in publicly owned programs.

However, the real differences between criminal justice system characteristics among treatment types are to be found comparing Table 23 overall with Table 25, in which we report on private for-profit facilities. The data regarding DWI/DUI in for-profit facilities are somewhat different from those seen in all facilities combined. The percentage of clients with DWI/DUI arrests is lower in private for-profit facilities (26 percent vs 32 percent), but the percentage of records where that information is unknown or not mentioned is higher (40 percent vs 32 percent). More striking is the percentage of clients in private for-profit

facilities who have been arrested for reasons other than DWI/DUI. It is about 40 percent lower than the system-wide average (30 percent vs 50 percent). The percentage with a prison or jail record is about half of the overall average and the percentage in treatment under legal constraint is only one-third of the average. (However, the estimates of the percent of clients in private for-profit facilities receiving drug treatment as a condition of probation or parole or who have a prison or jail record prior to admission have coefficients of variation greater than 0.3 and should be interpreted with caution.)

- o Thirty-two percent of those in treatment have had DWI/DUI arrests prior to admission.
- o Fifty percent of those in treatment have been arrested prior to admission to treatment (for offenses other than DWI/DUI).
- o Thirty-one percent of those in treatment have been in jail or prison.
- o About one-quarter of those in treatment are there as a condition of probation or parole.
- o Clients in residential and methadone treatment are much more likely to have an arrest record (other than DWI arrests) than are those in other types of treatment. They are also more likely to have prison or jail records (45 and 35 percent, respectively).
- o Clients in alcohol only treatment are most likely to have DWI arrests (53 percent). However, they are least likely to have arrest records for other causes (27 percent) or prison or jail records (16 percent).
- o In outpatient drug free facilities, 37 percent of clients are under some sort of legal system compulsion.
- o There are relatively small differences between clients in publicly-owned and not-for profit private facilities on these variables.
- o For-profit facilities are less likely to report criminal justice system status in client records and appear to serve a population with much less contact with the criminal justice system than do other kinds of facilities.

3.2.3 Medical and Psychosocial Characteristics

The percentage distribution of medical and psychosocial characteristics of clients at admission is reported in Table 27. These percentages are likely to be conservative, for not all medical and psychosocial characteristics may have been reported in client medical records. In one-third of the abstracted charts no mention was made of a negative or positive diagnosis of mental illness and substance abuse (data not shown).

Fewer than one in four clients had documentation of a chronic medical condition (23 percent), a prior history of psychological disorders (18 percent), or a dual diagnosis of substance abuse and mental illness at admission (13 percent). Clients in methadone treatment and hospital inpatient treatment had higher percentages with a chronic medical condition (31 percent and 29 percent, respectively) compared to clients in other treatment types. The percentage of dual diagnosis clients in hospital inpatient treatment (23 percent) was about double the percentage in residential treatment (10 percent, estimate unstable) or in outpatient drug free treatment (13 percent).

The AIDS/HIV status of most clients in treatment was unknown (85 percent overall). Only about 1 percent were known to be positive.

Only 4 percent of female clients in treatment were known to be pregnant at admission. However, this may be an underestimate since for more than half (53 percent) of the women in treatment, pregnancy status was either unknown to the treatment staff or not mentioned in the client record.

3.2.3.1 Chronic Illness

- o Twenty-three percent of all clients had chronic medical conditions at admission.

- o Clients in methadone treatment (31 percent) and hospital inpatient settings (29 percent) were the most likely to have chronic medical conditions; clients in residential settings (19 percent) the least.

3.2.3.2 Dual Diagnosis Clients

- o Over 18 percent of all clients had a history of a psychological disorder at admission.
- o More than one-quarter of the clients in hospital inpatient settings (28 percent) and one-fifth of those in outpatient drug free treatment (19 percent) had a history of a psychological disorder at admission.
- o Clients being treated in combination (17 percent) and residential (16 percent) treatment settings were less likely to have a history of a psychological disorder than those in hospital inpatient settings (28 percent).
- o About 13 percent of all clients had a documented dual diagnosis of substance abuse and mental illness at admission.
- o Clients in hospital inpatient settings were most likely to have a reported dual diagnosis (23 percent), while clients in outpatient drug free treatment were much less likely (13 percent).

3.2.3.3 HIV Status of Clients

- o For 85 percent of all clients, HIV/AIDS status was unknown or not stated in the record.
- o One percent of all client records reported a positive HIV status.

3.2.3.4 Pregnancy Status of Female Clients

- o About a quarter of all clients in treatment were female. Of these, slightly over 4 percent were known to be pregnant at admission, while 42 percent were known not to be pregnant.
- o The pregnancy status of 53 percent of all female clients at admission was unknown.

3.3 Clients' History of Drug Abuse and Prior Drug Treatment

DSRS results are available for several dimensions of drug treatment clients' immediate and long-term histories of drug use. Previous encounters with the drug treatment system are summarized in Table 28. In Table 29 clients' drug use patterns, i.e., single drug use vs polydrug use and the role of alcohol abuse, are discussed. The prevalence of reported use of specific drugs in the 30 days prior to the current treatment is examined next. Clients' history of intravenous drug use, ever and at admission, is the last topic discussed in this section.

3.3.1 Prior Drug Treatment History

Summary statistics on prior drug treatment history are presented in Table 28. A history of previous treatment may include treatment in programs at facilities other than the current facility. Clients' history of drug treatment was a fairly common data element in the discharge records. Across all treatment types, only 12 percent of the records had no mention of either a history or the absence of a history of previous treatment for substance abuse (data not shown). More than half of clients in treatment (53 percent) had a record of prior drug treatment; the current treatment was considered the first treatment program for substance abuse to which the client was admitted for the remaining 35 percent (data not shown). Data for previous treatment episodes in Table 28 are presented only for the 53 percent of clients with a history of substance abuse treatment.

- o Among clients in all treatment types, 53 percent have a history of previous episodes of substance abuse treatment. Over three-quarters of clients receiving methadone treatment had a history of previous treatment (78 percent). Both hospital inpatients and residential treatment clients had above average rates of previous drug abuse treatment (55 and 59 percent, respectively). The lowest

occurrences of a history of treatment appeared among the alcohol only (41 percent) and outpatient drug free (48 percent) client groups.

- o Clients with a prior drug treatment history reported an average of 1.4 other treatment episodes in the twelve months prior to the current admission. There is little variation in this average by current treatment type, and the means have very narrow sampling errors.
- o A mean of 2.3 previous episodes were reported over the lifetime of previously-treated clients. Among clients receiving methadone treatment, this mean was higher, 3.4 lifetime episodes. There is little variation in the mean across the other treatment categories.
- o All previous treatment episodes occurred over a mean time span of 3.3 years. The longest average history of treatment episodes (5.9 years) was reported for clients currently under methadone treatment. Hospital inpatient and alcohol only clients reported years in treatment longer than average (4.5 and 4.2 years, respectively), with residential (2.9 years) and outpatient drug free (2.4) clients presenting shorter treatment histories.

3.3.2 Patterns of Drug or Drug and Alcohol Problems (Presenting Problem at Admission)

Table 29 indicates that the most common presenting problem for clients in programs treating drug abuse is combined drug and alcohol abuse - about 42 percent of clients fall into this category. An additional 10 percent present with polydrug abuse (abuse of more than one drug, excluding alcohol). This means that 52 percent of all clients present with some sort of multiple substance abuse.

Multiple substance abuse, either polydrug abuse or combined alcohol and drug abuse, is most prevalent among clients in residential treatment (71 percent, comprised of 14 percent polydrug and 57 percent combined drug and alcohol abuse). Nearly two-thirds of clients in hospital inpatient (66 percent) and outpatient drug free treatment (62 percent) abused more than one substance. Even in methadone treatment programs 58 percent of clients presented with multiple substance abuse at admission.

Looking at patterns of drug abuse excluding alcohol, 24 percent of the clients at drug treatment facilities represented by this survey were admitted for abuse of drugs only (14 percent abused a single drug and, as noted above, 10 percent were polydrug users). When combined with the 42 percent of clients abusing both drugs and alcohol, 66 percent of clients were admitted for drug abuse problems. An additional 29 percent of clients were admitted with a presenting problem of alcohol abuse only. The patterns for the remaining 5 percent of clients were unknown.

- o Multiple substance abuse is common among those entering treatment.
- o In hospital inpatient programs and outpatient drug free programs, almost two-thirds of clients present with multiple substance abuse.
- o Over 70 percent of clients in residential programs present with multiple substance abuse.
- o Methadone treatment programs treat a substantial minority of clients (38 percent) with only a single abused drug at admission but even in this case the majority of clients (58 percent) abuse multiple substances.
- o Among all clients in programs treating drug abuse, 71 percent of clients present with alcohol abuse (with or without other drugs). Twenty-nine percent were admitted with a presenting problem at admission of alcohol abuse only, while 42 percent of the clients abused alcohol along with other drugs.

3.3.3 Types of Drugs Used 30 Days Prior to This Treatment

Information was abstracted on clients' use, prior to admission, of any of 17 legal and illegal drugs (Table 31). Table 30 presents the percentage of clients' recorded use of one or more drugs in any of 10 combined categories of drugs during the 30 days immediately preceding admission into treatment. If none of the listed drugs was mentioned as used by the client immediately prior to admission, the final category of "no drug use reported in last 30

days" was applied. The drug categories are not mutually exclusive; clients are counted in as many drug use categories as there were mentions of the cited drugs in the discharge records.

Answers to the recent drug use question were not dependent on results of drug testing.

Furthermore, mention of substance abuse could occur at any point in the course of treatment and was not abstracted only from self-reports at intake to treatment.

For 19 percent of all clients, none of the listed drugs was reported to have been abused in the 30 days before entering treatment. Lack of drug use in the preceding 30 days may have been due to under-reporting, voluntary abstinence, or admission to the current treatment from a controlled environment such as jail or another treatment program.

Use or non-use of specific drugs was often not mentioned among the discharge records reviewed. Alcohol use was not mentioned in 24 percent of the records, cocaine use in 48 percent, and marijuana/hashish/THC use in 48 percent of the charts (data not shown). Therefore, the percentages reported here represent a conservative estimate of drug use that occurred in the weeks prior to admission to treatment.

Variations in recent drug use across treatment types are discussed below. Some of this variation can be linked to treatment facility requirements or to DSRS study definitions. For example, DSRS re-categorized clients as "alcohol only" if their presenting problem was alcohol and there was no mention of any other drug use reported in their records. Secondly, most methadone treatment programs require evidence of heroin abuse for admission.

- o Nearly one-fifth (19 percent) of the drug treatment clients had no specific drug mentioned as having been used in the 30 days prior to admission. Thirty-one percent of the outpatient drug free clients had no recent drug use cited.

- o Among all clients, the majority had used alcohol in the 30 days prior to admission (61 percent), almost a third had used cocaine and/or crack (31 percent), and a quarter had used marijuana, hashish, or THC (26 percent). Twelve percent had used opiates. The remaining six drug types were mentioned infrequently; inhalants were least frequently reported.
- o Recent opiate use occurred much more frequently among methadone treatment clients (83 percent) than among clients in any other treatment type.
- o More than half of residential clients (55 percent) and about two-fifths of hospital inpatient clients (42 percent) and methadone clients (39 percent) used cocaine, including crack.
- o About a third of clients in hospital inpatient (38 percent), outpatient drug free (34 percent), and residential treatment (29 percent) used marijuana prior to treatment.
- o Recent use of alcohol appeared among all client treatment types, and was the most frequently mentioned drug among clients in all treatment types except clients in methadone treatment.
- o Hospital inpatient clients reported the highest or second highest percentage using each drug.

Table 31 presents in more detail the percentages of clients with drug use reported in the 30 days prior to admission. The drugs constituting the cocaine/crack, opiate, sedative, amphetamine, and hallucinogen categories are each listed separately.

- o Cocaine was mentioned as a drug used in the 30 days prior to admission nearly three times as frequently as its derivative crack (26 percent versus 9 percent). Cocaine appeared as a significant drug of abuse in all drug treatment groups, while mention of crack ranked highly only among the hospital inpatient and residential client groups.
- o Heroin accounted for about 70 percent of the total opiate use; the "other" opiates/synthetic category is mentioned in only 3 percent of the treatment charts.
- o Benzodiazepine use is more common than use of barbiturates or other sedatives.

3.3.4 Intravenous Drug Use (IVDU) Characteristics

Table 32 presents results on the intravenous drug use (IVDU) status of clients at admission or any time in the past, and HIV or AIDS status for clients with a history of IVDU. One goal of DSRS was to assess the availability of this information on discharge records. Record abstraction revealed that history of or report of current IV drug use was absent in almost one half (48 percent) of records. Information about HIV/AIDS status was not mentioned or otherwise not available for more than three-quarters (79 percent) of IVDU client records.

However, one in five clients had a history of IV drug use, but fewer than one in ten clients were IVDUs at admission to treatment. For this 9 percent of clients, nearly two-thirds injected daily.

Fewer than 6 percent of IVDU clients were reported to be HIV or AIDS positive in client records, but this estimate has a coefficient of variation greater than 0.3 and should be interpreted with caution. Almost 16 percent of IVDU clients were reported to be HIV negative. As stated previously, HIV/AIDS status was missing for 79 percent of IVDU clients.

- o Twenty percent of clients had ever used IV drugs. More than 85 percent of methadone clients had a reported history of IV drug use. Both hospital inpatient (27 percent) and residential treatment (24 percent) clients were more likely to have ever been IVDUs than were outpatient drug free clients (13 percent).
- o About 9 percent of clients were IVDUs at admission to treatment. These were mainly clustered in methadone treatment (60 percent) with a much lower incidence among residential clients (7 percent).
- o Most IVDUs injected daily (65 percent). Among methadone clients who injected drugs at admission, daily IV drug use was nearly universal (95 percent). About two thirds of clients who were IVDUs at admission to hospital inpatient or residential treatment were daily IVDUs.

- o Very little is known about clients' HIV/AIDS status from the records that were available to abstractors. Among all clients, data were unavailable for 85 percent of clients (Table 27). Among IVDUs, information was not available for 79 percent of clients. This ranged from 89 percent for outpatient drug free IVDU clients to 62 percent for IVDU clients in hospital inpatient treatment.
- o Among all clients, 1 percent were reported to be HIV/AIDS positive, and 8 percent were reported to have a negative status (Table 27).
- o Among IVDU clients, 6 percent (estimate unstable) had an HIV/AIDS positive status and 16 percent were negative.

3.4 Treatment Characteristics

The prevalence of testing for substance abuse during the current treatment is discussed below, as is the delivery of different treatment services to clients. These results, along with services received by treatment type, are summarized in Table 33. Characteristics of the drug treatment provided to clients receiving methadone is the third topic discussed in this section on current treatment.

3.4.1 Drug Testing in Treatment

Approximately 43 percent of all clients were tested for substance abuse during treatment (see Table 33).

- o The highest percentage (84 percent) of clients tested were in methadone treatment.
- o Large percentages of clients were also tested in combination forms of treatment (76 percent) and hospital inpatient settings (73 percent).
- o Forty-five percent of clients in residential settings and 26 percent of outpatient drug free clients were tested for substance abuse during treatment.

3.4.2 Services Received in Treatment

Table 33 also reports the percentage of clients who received selected services. In this table, a positive response was coded if the record stated that the service was given, even if the service was not completed.

The majority of clients in treatment participated in individual counseling (80 percent), group counseling (70 percent), and self-help groups (54 percent). Many clients received drug education counseling (43 percent), detoxification (36 percent), activity groups (32 percent), and family counseling (22 percent). Education classes, employment counseling, and job training were each provided less frequently, to fewer than 8 percent of all clients. Day care services were provided to only 0.1 percent of all clients. All estimates for these four services have coefficients of variation greater than 0.3 and should be interpreted with caution.

Hospital inpatient clients used a wide range of services, the majority receiving individual and group counseling, detoxification, self-help groups, activity groups, and drug education counseling. Family counseling was also provided to 44 percent of all hospital inpatient clients. The majority of residential treatment clients received individual counseling and group treatment (i.e., group counseling, self-help groups, and activity groups). Methadone clients frequently received individual counseling and detoxification services. Among outpatient drug free treatment clients, individual counseling (81 percent) and group counseling (56 percent) were frequently provided, while drug education counseling (27 percent) or participation in self-help groups (29 percent) were less common.

Individual Counseling

- o Individual counseling was the most frequently received service, with 80 percent of all clients receiving this service. The percentage of clients receiving this service was fairly similar in all treatment types, from a low of 70 percent for methadone treatment, to a high of 95 percent in combination forms of treatment.

Group Counseling

- o Group counseling was the next most frequently received service, with 70 percent of all clients receiving this service.
- o The likelihood of group counseling being received varied greatly by treatment type, from a low of 23 percent for clients receiving methadone (estimate unstable) to a high of 93 percent for clients receiving combination treatments. This service was also frequently received in residential (84 percent), hospital inpatient (80 percent), and alcohol only treatment groups (69 percent).

Self-help Groups

- o More than half of all clients (54 percent) participated in self-help groups.
- o More than half of clients in alcohol only treatment (56 percent) and at least two-thirds of clients in combination, residential, and hospital inpatient treatment programs participated in self-help groups (81, 71, and 69 percent, respectively).
- o Clients in outpatient drug free treatment were less likely to participate in self-help groups (29 percent).

Drug Education Counseling

- o Drug education counseling was given to 43 percent of all clients. This service had a fairly wide range, with only 25 percent of methadone treatment clients (estimate unstable) and 51 percent of hospital inpatient clients receiving such education.

Detoxification

- o Detoxification services were provided to 36 percent of all clients. This service also had a wide range, ranging from 3 percent for outpatient drug free clients (estimate not stable) to 70 percent for hospital inpatient clients, and clients in

combination treatment. Methadone treatment clients were also likely to receive detoxification services (65 percent).

Activity Groups

- o Thirty-two percent of all clients participated in activity groups.
- o Very few methadone and outpatient drug free treatment clients participated in these groups (4 percent for both, estimates unstable), while more than half of all combination (62 percent), hospital inpatient (63 percent), and residential clients (50 percent) participated.

Family Counseling

- o Twenty-two percent of all clients received family counseling. It was most commonly provided to hospital inpatient treatment clients (44 percent), and least commonly provided to methadone treatment clients (9 percent, estimate unstable).

Education Classes, Employment Counseling, Job Training, Day Care Services

- o Less than 10 percent of clients received education classes (8 percent), employment counseling (4 percent), and job training (2 percent). Those most likely to receive these services were in residential treatment settings. (All these estimates are unstable.)
- o Only 0.1 percent of all clients received day care services (estimate unstable).

3.4.3 Characteristics of Methadone Treatment

Abstractors were asked to record whether or not clients were given methadone during treatment, as well as the characteristics of this treatment. Information is presented about dosages given, take-home supplies received, and the length of methadone treatment. These results are presented in Table 34.

Based on the Phase II sample of discharged client records, an estimated five percent of clients received methadone in treatment. More than two-thirds of methadone clients

received treatment in an outpatient setting (71 percent), and somewhat more than a quarter (27 percent) were treated with methadone as hospital inpatients (data not shown).

The daily dosage amount was abstracted for clients for the first and last administration of methadone. Since the maximum dosage amount for the client's entire treatment episode was not abstracted, dosage amounts reported here do not reflect the maximum therapeutic doses given to clients. The average daily dosage for the first methadone treatment dosage was 30 milligrams. It ranged from a low of 2 milligrams to a high of 80 milligrams (data not shown). However, three-quarters of clients had average first daily dosages that only varied by 5 milligrams, ranging from 25 to 30 milligrams. There was little difference in the average daily dosage for the first treatment for clients treated in hospital inpatient settings (26 mg) and those treated in outpatient methadone settings (32 mg).

The mean last daily dosage of methadone decreased to 22 milligrams. Clients' last treatment dosage had a wider range from 1 to 100 milligrams (data not shown). There was greater variability among client dosages as well. From 50 to 75 percent of clients received dosages ranging from 20 to 40 milligrams.

Clients in outpatient settings were more likely to receive slightly higher dosages than hospital inpatient clients for both first administration (32 vs 26 milligrams, respectively) and last administration (27 vs 11 milligrams, respectively) (latter estimate unstable).

There was little variation between average daily dose and average single dose. All clients in outpatient treatment (100 percent) received methadone in a single daily dose, while clients treated in hospital inpatient settings were less likely to receive only one dose for their

first treatment (67 percent, estimate unstable). However, by the time of their last dosage, 93 percent of clients in hospital inpatient treatment were receiving a single daily dose.

Nearly a third of clients received methadone to take away from the treatment program. Slightly less than half (45 percent) of clients in outpatient settings took their methadone away from the site.

While the average length of stay⁷ for all methadone clients (those receiving methadone in hospital inpatient or outpatient settings combined) is 321 days (estimate unstable) (see Table 35), average length of methadone treatment is somewhat shorter (298 days, estimate unstable). As would be expected, average hospital inpatient treatment is only 10 days while average outpatient methadone treatment is much longer, 407 days (estimate unstable). Length of methadone treatment ranged from 1 to 6,259 days (17 years, data not shown). However, half of clients had methadone treatment duration of 112 days or less. Nineteen percent of clients had received methadone treatment for more than a year, 10 percent of these for two years or more. Five percent of clients had methadone treatment durations greater than 5 years (data not shown).

- o Five percent of all clients received methadone in treatment.
- o Average methadone dose was about 30 milligrams for the first treatment, and about 22 milligrams for the last treatment.
- o A third of clients (33 percent, estimate unstable) received methadone to take away from treatment.
- o The average length of methadone treatment, based on clients who had ended treatment during the DSRS study period, was 298 days (estimate unstable), but the median length of treatment was 112 days based on clients who had ended treatment during the DSRS study period (data not shown). Eighty-one percent

⁷Average length of stay is calculated from admission date to discharge date.

of clients were in treatment for less than one year, 90 percent under two years. Only 5 percent of clients were in treatment for longer than 5 years (data not shown).

- o Most methadone clients (71 percent) received methadone treatment in outpatient settings. On average, outpatient clients received higher last treatment dosages than clients in a hospital inpatient setting (27 vs 11 milligrams, latter estimate unstable).

3.5 Discharge Characteristics

Table 35 reports discharge characteristics of drug treatment clients. Average lengths of stay, the distribution of reasons for discharge, and the percentage of clients discharged with a dual diagnosis of substance abuse and mental illness are presented. Like the estimated percentage of dually diagnosed clients at admission, the estimate of dually diagnosed clients at discharge is likely to be conservative.

3.5.1 Length of Stay

Average length of stay (ALOS) was lowest among hospital inpatient clients and highest among methadone treatment and outpatient drug free treatment clients. Methadone treatment clients had the most variable length of stay.

The terms admission and discharge, the components for determining length of stay, may have different meanings for different treatment settings and even for different programs within the same treatment setting. Recognizing this, abstractors collected the dates when clients began and finished receiving treatment services (treatment duration) in addition to the admission and discharge dates (length of stay).

The preliminary comparison of duration of treatment with ALOS reveals that ALOS was 25 percent longer than the average duration of treatment⁸ (109 days vs 87 days, respectively; duration data not shown). These differences were especially pronounced for alcohol only clients (with an ALOS of 132 days vs an average duration of 98 days) and those in outpatient drug free setting (with an ALOS of 178 days vs an average duration of 135 days). ALOS for outpatient drug free clients is only approximate because the actual number of days in which visits were made to the treatment program is unknown.

- o ALOS ranged from a low of 24 days for hospital inpatient clients to a high of 321 days (estimate unstable) for methadone treatment clients.
- o Residential clients averaged 47 days in treatment.
- o The sampling error for methadone treatment clients (105 days) was very high relative to the mean ALOS (321 days, estimate unstable), indicating that the length of stay of these clients has an extremely wide range.
- o As was true of the mean, the lowest median length of stay (19 days) was for hospital inpatient clients. The highest was for methadone treatment clients and outpatient drug free clients (134 days for both).

3.5.2 Clients with a Dual Diagnosis at Discharge

The percentage of clients reported to have a dual diagnosis of substance abuse and mental illness at discharge is likely to be conservative, for clients in drug treatment facilities are not all being evaluated for the presence of a mental disorder. In 39 percent of the abstracted charts, no mention was made of the presence or absence of a dual diagnosis (data not shown).

⁸Average duration of all treatment is calculated from date of first treatment services received to date of last treatment services received.

While 13 percent of clients had been admitted with a dual diagnosis of substance abuse and mental illness (see Table 27), a smaller percentage, 9 percent, were discharged with a dual diagnosis. The highest percentage of clients discharged with a dual diagnosis were in hospital inpatient settings (20 percent, estimate unstable). The highest percentage of patients admitted with a dual diagnosis (see Table 27) were also in hospital inpatient settings, and the two percentages were very close (23 percent at admission and 20 percent at discharge). Residential and methadone treatment settings had the lowest percentage of dually diagnosed clients discharged (5 percent, each, both estimates unstable). All estimated percentages of dual diagnosis at discharge for each treatment type are statistically unstable.

- o Nine percent of all clients had a documented dual diagnosis of substance abuse and mental illness at discharge.
- o The percentage of dually diagnosed clients was highest in hospital inpatient settings (20 percent, estimate unstable) and lowest in residential and methadone treatment settings (5 percent, each, both estimates unstable).

3.5.3 Reasons for Discharge

Only about half of all clients (48 percent) completed treatment as planned. Clients in combination (65 percent), residential (62 percent), hospital inpatient (58 percent) and alcohol only treatment (54 percent) were more likely to complete treatment as planned than clients in outpatient drug free (24 percent) and methadone treatment settings (32 percent).

- o About half (48 percent) of all clients completed treatment as planned.
- o Clients were most likely to complete treatment in combination (65 percent), residential (62 percent), hospital inpatient (58 percent) and alcohol only treatment settings (54 percent), and least likely to complete treatment in outpatient drug free (24 percent) and methadone treatment settings (32 percent).
- o For 5 percent of all clients, reason for discharge was unknown.

- o Surprisingly, the occurrence of unknown reason for discharge appears to be higher for clients in hospital inpatient treatment (8 percent) and lower for clients in outpatient drug free treatment (4 percent). All estimates of unknown reason for discharge by treatment type are statistically unstable and should be interpreted with caution.
- o Slightly less than half of all clients (47 percent) did not complete treatment. About one percent of all clients were known to be incarcerated prior to completing treatment (estimate unstable).
- o Thirty percent of all clients did not complete treatment by client choice, while 9 percent did not complete treatment by administration choice. Five percent were referred to another program.
- o Hospital inpatient clients (13 percent, estimate unstable) and methadone treatment clients (10 percent) were most likely to be referred to other programs before discharge. Clients in alcohol only treatment (3 percent, estimate unstable) were less likely to be referred.
- o Those clients leaving the program by administration choice were fairly evenly distributed across treatment types, being highest in outpatient drug free settings (12 percent, estimate unstable), and lowest in hospital inpatient settings (6 percent).
- o Clients were most likely to leave by their own choice from outpatient drug free settings (53 percent) and methadone treatment (40 percent), and less likely to leave residential settings (19 percent) by their own choice.

3.6 Treatment Charges

A discussion of the sources of payment for treatment and charges billed for treatment is presented in this section. Primary source of payment is reported for all clients in Table 36 and by facility ownership type in Tables 37 through 39. The type of billing information available in client records is presented in Table 40, while mean, median and mean per diem charges by client treatment type are reported in Table 41. Statistics for clients completing the planned substance abuse treatment are presented in Table 42 and results for clients not completing treatment are in Table 43.

3.6.1 Primary Source of Payment: For All Clients and For Clients in Public, Private For-Profit and Private Non-Profit Facilities

Table 36 describes the sources of payment expected at admission for the entire sample. Tables 37 through 39 provide the same information segmented by facility ownership. Table 37 deals with public facilities, Table 38 deals with private for-profit facilities and Table 39 with private non-profit facilities. These data report the expected primary source of payment for treatment for each client.

Primary source of payment was unknown or not mentioned in 14 percent of client records. Data were most likely to be available for outpatient drug free and alcohol only clients (only 8 and 10 percent unknown, respectively). All of these estimates are unstable.

The largest portion of clients fall into the self-pay category for primary source of payment (23 percent). Clients whose primary payment source is private health insurance constitute the second largest group, at 19 percent. In addition, when "HMO/other prepaid plans" are included with clients reporting private insurance as their primary payment source, 23 percent of clients have their treatment paid for primarily by some form of private insurance. Finally, about 13 percent of clients depend on Medicaid for their primary source of payment. No other specified single source of payment exceeded 5 percent of the total.

There are substantial differences in client source of payment among facilities of different ownership status. Publicly-owned facilities (Table 37) have a very large percentage of clients who fall primarily into the self-pay category (42 percent, estimate unstable) and about the same percentage as the total sample in the Medicaid category (13 percent, estimate unstable). However, publicly-owned facilities serve far fewer clients with private insurance - 6 percent (estimate unstable).

Private for-profit facilities have only about 14 percent of their clients (estimate unstable) in the self-pay group. They serve very few Medicaid patients (5 percent, estimate unstable) and a large percentage of privately-insured patients (57 percent, 69 percent including HMO clients) when compared to the rest of the treatment system.

Private non-profit facilities have many more clients than public facilities with private insurance (17 percent, and 22 percent including the HMO group), and a slightly larger percentage of clients with Medicaid as a primary source of payment (14 percent). Only 15 percent are self-pay clients, only a third as many clients as in public facilities.

Cell size and data variability make it difficult to draw conclusions about differences among facilities by type of treatment. However, it does appear that hospital inpatient programs serve a much smaller self-pay population than do alternative treatment approaches. Private insurance is only a minor source of payments for clients in residential and methadone treatment programs.

- o Almost a quarter of clients (23 percent) in drug treatment are themselves the primary source of payment (self-pay) for their treatment. The percentage in the self-pay category varies from 42 percent (estimate unstable) in public facilities to 14 percent (estimate unstable) in private-for-profit and 15 percent in private non-profit facilities.
- o Private insurance (including HMOs and other prepaid plans) is the primary source of payment for 23 percent of clients in treatment. This varies from 6 percent (estimate unstable) among public facilities to 22 percent among non-profit facilities to 69 percent among for-profit facilities.
- o Medicaid is the primary source of payment for 13 percent of clients. This varies from 5 percent (estimate unstable) in for-profit programs to 14 percent in non-profit programs.
- o For clients in hospital inpatient treatment, 48 percent have private health insurance (including HMOs and other prepaid plans) as a primary source of payment. Medicaid is the second most frequent source of payment for hospital inpatient clients (16 percent, estimate unstable). Very few hospital inpatient clients are self-pay (4 percent, estimate unstable).

- o Self-pay is the most common source of payment for clients in outpatient drug free treatment (30 percent), with private health insurance (including HMOs and other prepaid plans) the second most frequent payment source (27 percent).
- o Medicare payment is most common among clients in hospital inpatient treatment and alcohol only treatment (each 6 percent, both estimates unstable).

3.6.2 Characteristics of Billed Charges

Abstractors recorded the amount of charges billed to the client, where possible, and also indicated if no charges were billed. These charges do not represent the cost of providing substance abuse treatment to clients or the clients' payment source. The charges billed referred to the full amount billed, a sliding fee amount, a reduced amount, or some other type of payment. The percentage distribution of clients in each of these categories is presented in Table 40. Mean and median total charges and mean per diem charges are presented in Table 41. Mean and medial total charges and mean per diem charges for clients completing treatment are displayed in Table 42, and similar information is arrayed for clients not completing treatment in Table 43.

As Table 40 shows, payment information was obtained for about two-thirds of all clients (65 percent), including the 6 percent (estimate unstable) not billed for treatment. In some treatment facilities, billing information was in separate files at different locations, and abstractors were unable to access these files. Billing information was unknown or not mentioned for 28 percent of all clients. Abstractors were not permitted to abstract billing information for about 6 percent (estimate unstable) of all clients.

All billing information presented for methadone clients should be interpreted with caution. Methadone clients had the highest percentage of unobtainable charge data

(72 percent). Although billing information was available for the majority of clients in treatment types other than methadone, these estimates are not stable.

Over a third of clients (34 percent) were reported to have been billed the full amount of charges they accrued while in treatment. Nearly half of clients in alcohol only and hospital inpatient treatment were billed the full amount of charges (48 percent, and 41 percent, respectively, both estimates unstable), while slightly more than a quarter of clients in residential treatment (27 percent, estimate unstable) were billed the full amount.

About one in seven clients (14 percent, estimate unstable) were billed according to a sliding fee scale. This was most common for clients in residential treatment (26 percent, estimate unstable) and less common for clients in alcohol only treatment (19 percent, estimate unstable) or for those in outpatient drug free treatment (10 percent, estimate unstable).

- o Billing information was abstracted for 60 percent of all clients.
- o Billing information was unknown, not permitted to be abstracted, or not mentioned for 72 percent of methadone clients.
- o More than 34 percent of all clients were charged the full amount of their accrued charges.
- o Sliding fee arrangements were used for 14 percent of clients (estimate unstable).
- o Six percent of clients (estimate unstable) were not billed for their treatment.
- o Clients billed the full amount were most likely to be located in alcohol only treatment (48 percent) or hospital inpatient treatment (41 percent). Both of these estimates are unstable.
- o The most frequent incidence of sliding fee billing occurred for clients in residential treatment (26 percent) while it was a relatively uncommon mechanism for clients in outpatient drug free treatment (10 percent). Both estimates are unstable.
- o Approximately half (53 percent) of clients were billed some amount for their treatment.

3.6.3 Mean, Median, and Mean Per Diem Statistics for Billed Charges: For All Clients and For Clients Completing Planned Treatment and Clients Not Completing Treatment

As noted earlier all data are based on information from the 118 non-criminal justice facilities offering primary drug treatment (not alcohol only treatment). Table 41 presents mean, median, and mean per diem charge information for clients with valid billed charges and for clients billed the full amount for their treatment. Median charges are also presented because they are more stable and are not subject to distortion by extreme high or low charges, as are mean charges. It should be emphasized that these are charge data, not cost data, and therefore may present a different picture of the expense of drug treatment than would cost data. Also, while these data were abstracted primarily from client billing records, the extensiveness of record-keeping varied widely among facilities. The completeness of the data reported here reflects information currently available to abstractors in the field.

Two caveats should be kept in mind when interpreting the data presented below. First, as Table 40 has shown, charge data were unavailable for abstraction from more than a third of all client charts. For clients in methadone treatment, charge data were not obtained for more than two-thirds of clients. The available charge data for methadone clients are presented for the reader's information, but these estimates are highly unstable and would most likely be different if more information had been available for more clients. Second, sampling errors for many of the estimated means are large and indicate great variability in the charge data.

For clients with any billed charges, i.e., a dollar amount greater than \$0, Table 41 presents the mean total billed charges for drug or drug and alcoholism treatment, the median charges, and the mean per diem charges. The mean per diem cannot be appropriately calculated for clients receiving outpatient drug free treatment because the actual number of days in which visits were made to the treatment program is unknown. While the statistic has

been calculated for methadone clients, the inherent variability in days of treatment probably contributes to the instability of these estimates.

Mean total billed charges are highest for hospital inpatient clients (\$7,348), more than ten times the amount for clients in outpatient drug free treatment (\$669). Mean charges for residential treatment for all clients with any billed charges are (\$1,862) and somewhat less for clients in alcohol only treatment (\$1,105). All estimates, except for hospital inpatient charges, are statistically unstable.

The charge data for alcohol only clients should be interpreted with caution because these clients represent a mixed group who received services from a number of different settings. For example, mean total billed charges for alcohol clients billed any amount range from \$754 (estimate unstable) for those in outpatient drug free settings to \$5,491 for those clients in hospital inpatient settings (data not shown). As Table 9 has shown, however, overall mean total billed charges for clients billed the full amount are considerably lower for alcohol only clients (\$1,414, estimate unstable) than for clients receiving treatment for drug or combined drug and alcohol abuse (\$3,143).

Charge data are also examined in Table 41 for clients reported to have been billed the full amount for their treatment, a subgroup of clients billed any amount. This charge information is not distorted by charges for sliding fees, reduced amounts or other forms of payment. The highest mean, median, and mean per diem full charges are for clients in hospital inpatient treatment where mean and median charges are estimated at \$7,032 and \$6,634, respectively. The mean per diem charge of \$476 for hospital inpatient treatment is more than three times higher than the mean per diem charge of \$137 (estimate unstable) for

clients in residential treatment who were billed the full amount and more than five times the mean per diem charge of \$81 (estimate unstable) for clients in methadone treatment.

Lowest charges are reported for clients in outpatient drug free treatment where mean total billed charges for clients billed the full amount are estimated to be \$784 (estimate unstable) and median total billed charges are \$420.

Estimates for Clients Billed Any Amount for Treatment

- o Mean and median total billed charges are highest for hospital inpatient clients, with mean and median charges \$7,348 and \$6,455, respectively, and a mean per diem charge estimated to be \$455.
- o Charges in residential facilities have the second highest magnitude, with mean and median charges estimated to be just under \$2,000 and mean per diem charges estimated at \$86.
- o Clients in outpatient drug free treatment have the lowest estimated charges with a mean total charge of \$669 (estimate unstable) and a median estimated at \$237.
- o All billing information presented for methadone clients should be interpreted with caution because all mean estimates have coefficients of variation above 0.3, indicating the estimates are unstable and could differ if similar information were to be abstracted from another sample.

Estimates for Clients Billed for the Full Amount of Treatment

- o Estimated mean and median charges for hospital inpatient treatment places charges for this form of treatment at \$6,634 and mean per diem charges at \$476.
- o Estimated mean and median charges for clients billed the full amount in residential treatment are \$3,108 (estimate unstable) and \$5,073 respectively, with the median estimated higher than the mean. This substantiates information discussed above that a relatively high percentage of residential clients (26 percent, estimate unstable) are billed according to a sliding fee scale.
- o Median charges for hospital inpatient and residential treatment for clients billed the full amount are similar in magnitude, with residential treatment being \$5,073 and hospital inpatient \$6,634.

- o Charge estimates for methadone clients are unstable and should be interpreted with caution.

Charges for treatment may vary by whether or not the client has completed treatment. Tables 42 and 43 present estimated charges for those clients who completed planned treatment and for those who did not complete treatment. In the top portion of both tables, the mean, median, and mean per diem charges are presented for clients who had valid billed charges reported in their records. The lower portion of both tables presents mean, median, and mean per diem charges only for those clients who were reported to have been billed the full amount for their treatment. As stated previously, charge data were available for only about two-thirds of all client records. Charge data were only available for about a quarter of methadone client records. The sampling errors for most of the estimated mean charges are high and therefore all data should be interpreted cautiously.

Charge data are presented for the estimated 48 percent of clients completing planned treatment and the estimated 52 percent of clients who did not complete treatment or whose outcome was not specified. The means and medians indicate that charges are higher for clients who completed planned treatment than for those who did not. Median billed charges are about 5 times higher for clients, billed any amount, who completed residential treatment than for those who did not (\$4,030 vs \$782, respectively), and about two and a half times higher for hospital inpatient clients who completed treatment than for those who did not (\$9,413 vs \$3,883, respectively).

When including only clients reported to have been billed the full amount for treatment, the difference in mean charges between those completing treatment and clients leaving before treatment ended becomes more pronounced. For example, mean total billed

charges were almost double for clients completing treatment in outpatient drug free programs (\$1,032, estimate unstable) compared to outpatient clients who did not complete planned treatment (\$689, estimate unstable). Median billed charges are also about double for clients billed the full amount in outpatient drug free programs who completed treatment than for those who did not (\$795 vs \$385, respectively).

The charge data within treatment type for clients billed the full amount reveal that the ratio of median charges for those who completed treatment compared to charges for those who did not differs by type of treatment. For example, treatment completion appears to have a stronger effect on charges for clients billed the full amount in residential treatment than for those in hospital inpatient treatment. Median charges are two and a half times higher for clients in hospital inpatient treatment who complete treatment than for those who do not (\$9,858 vs \$3,891, respectively). For clients in residential treatment, the variability is much greater. The median charges are 6 times greater for clients billed the full amount and completing treatment, estimated to be \$6,143, than for clients who did not complete treatment, estimated to be \$1,000.

Estimates of Client Charges for Those Completing and Not Completing Treatment

- o Large sampling errors indicate great variability in the charge data.
- o Charge data were unavailable for more than two-thirds of methadone clients. The available charge data for methadone clients are presented for the reader's information, but these estimates are highly unstable and would most likely be different if more information had been available.
- o Mean and median charges are higher for clients who completed planned treatment than for those who did not.
- o For hospital inpatient clients billed any amount, median total billed charges are about 2.4 times higher for clients who completed treatment than for those who did not complete treatment (\$9,413 vs \$3,883, respectively).

- o Treatment completion has a strong effect on charges for clients billed the full amount in overnight modalities. Median charges for residential clients who were billed the full amount and completed treatment were 6 times higher compared to clients who did not complete treatment. Median charges are 2.5 times higher for hospital inpatient clients who completed treatment and were billed the full amount.
- o On the other hand, for outpatient drug free clients billed any amount, median total billed charges are only about one-third higher for clients who completed treatment than for those who did not complete treatment (\$282 vs \$210, respectively).
- o For outpatient drug free clients billed the full amount, median total billed charges for clients who completed treatment are about double the charges for those who did not (\$795 vs \$385, respectively).

3.7 Post-Treatment Referrals

Abstractors categorized and recorded any post-treatment referrals into one of the following categories: no further treatment, hospital inpatient treatment, residential treatment, outpatient methadone maintenance treatment, other outpatient treatment, or some other form of treatment. The percentage distribution of these referrals is reported in Table 44.

More than a third of all clients (36 percent) were given post-treatment referrals after they were discharged, while 41 percent were specifically not referred, and an additional 23 percent had no mention of referral in their records.

Hospital inpatient clients were most likely to receive further referrals. The majority (60 percent) were referred for further treatment. More than a quarter (29 percent) were referred to outpatient treatment (other than methadone), 16 percent were referred to other forms of treatment, 10 percent (estimate unstable) to residential treatment, and 5 percent (estimate unstable) to other hospital inpatient settings.

Nearly half of residential clients (47 percent) were referred for further treatment. Fourteen percent (estimate unstable) were referred to outpatient treatment (other than

methadone), 17 percent to other forms of treatment, and 12 percent (estimate unstable) to other residential settings.

For methadone treatment clients, 36 percent were referred for further treatment after discharge. Sixteen percent were referred to outpatient methadone programs, 9 percent (estimate unstable) to other forms of treatment, and 2 percent (estimate unstable) to hospital inpatient programs.

Only 15 percent of all outpatient drug free clients received further treatment referrals. Seven percent were referred to other forms of treatment, 3 percent to residential programs, 3 percent to other outpatient programs, and 2 percent to hospital inpatient treatment. All of these estimates are unstable.

Twenty-nine percent of all alcohol only clients were referred for further treatment: 18 percent to outpatient treatment (other than methadone), 4 percent to residential treatment, and 6 percent to other forms of treatment (all of these estimates are unstable). Thirty-three percent of all clients in combination forms of treatment were referred for further treatment, with 18 percent being referred to other outpatient forms of treatment.

- o More than a third of clients (36 percent) were referred for further treatment after discharge.
- o Hospital inpatient clients were the most likely to be referred (60 percent were referred).
- o Outpatient drug free treatment clients were least likely to be referred for further treatment (15 percent were referred).
- o For almost a quarter of all clients (23 percent), post-treatment referrals were unknown.
- o Post-treatment referrals were most likely to be unknown for clients receiving combination treatments (53 percent, estimate unstable), and least likely for clients receiving hospital inpatient (16 percent). Post-treatment referrals were unknown for 32 percent of methadone treatment clients.

- o Fourteen percent of all clients were referred to outpatient treatment other than methadone maintenance. Only 1 percent of referrals were to outpatient methadone maintenance treatment.
- o Referrals to outpatient treatment other than methadone treatment ranged from a low of 3 percent (estimate unstable) from outpatient drug free treatment programs to a high of 29 percent from hospital inpatient settings.
- o Methadone treatment clients were more likely to be referred to outpatient methadone maintenance treatment than other treatment types (16 percent of the clients in these programs were referred out for more methadone treatment).
- o Eight percent of all clients were referred to residential treatment, 2 percent (estimate unstable) to hospital inpatient treatment and 11 percent to some "other" form of treatment.
- o Clients in hospital inpatient and residential settings were most likely to be referred to "other" forms of treatment (16 and 17 percent respectively); outpatient drug free and alcohol only the least likely to be referred to such treatment (7 percent and 6 percent, respectively). Both of these last estimates are unstable.

Appendix I

Glossary

Glossary

Drug Services Research Survey (DSRS) Phase II Client-Data

DSRS Facility Survey, Phase I	The Facility Survey, also referred to as Phase I, is the mail/telephone portion of the DSRS survey which was conducted for 1,183 drug treatment facilities. Phase I, completed in August 1990, collected information on policies and procedures and aggregated client data from sampled treatment programs. These results were presented in an earlier report.
DSRS Client Data, Phase II	The DSRS Client Data, also referred to as Phase II, are the results of site visits to 120 facilities randomly selected from programs reporting a drug treatment environment/modality of care in the 1989 NDATUS and still providing drug or drug and alcoholism treatment in September 1990. 2,222 abstracts of sampled client discharges were completed October-December, 1990. Information was abstracted on client characteristics at admission and on the characteristics of drug treatment provided.
Sampling Frame, Facility Survey	The mailing list (Master UID file) for the 1989 National Drug and Alcoholism Treatment Unit Survey (NDATUS) was the main sampling frame for DSRS. Facilities were excluded that (a) were known to be prevention only or not providing treatment at the most recent update of April 1990, (b) were not in the coterminous U.S., or (c) were participants in the DSRS pilot test. The sampling frame was refined and stratified by treatment modality based on information from the 1989 NDATUS surveys.
Sampling Frame, Client Data	The NDATUS MUID sampling frame used in the DSRS Facility Survey was modified before facilities were selected for possible site visits and abstraction of client discharge data. Only facilities reporting a drug treatment environment/ modality (hospital inpatient, residential, outpatient detoxification/maintenance, and outpatient drug free) in the 1989 NDATUS were included. Excluded from the Client Survey were facilities reporting alcohol treatment only, and facilities new or unknown to NDATUS in 1989.
Discharge Sampling Frame	A sampling frame of drug treatment clients discharged from the DSRS Phase II facilities from September 1, 1989 through August 31, 1990 was compiled by the DSRS Client Data abstractors. All clients discharged for any reason, including death and non-completion of treatment, were to be included. Attempts were made to exclude clients treated for alcohol abuse only, those admitted and discharged on the same day, and those discharged without receiving any treatment for substance abuse (e.g., treated only for mental illness or co-dependence). If included in the discharge sampling frame, clients in the last two categories were labelled ineligible and excluded from the analyses.

Phase I

See DSRS Facility Survey.

Phase II

See DSRS Client Data.

Respondents

For the purposes of this report, discharged clients are the unit of analysis. To be eligible for inclusion, clients had to be discharged, for any reason (including death), from September 1, 1989 through August 31, 1990. Only a few sampled facilities were able to exclude clients treated for alcohol abuse only. Clients not receiving treatment for substance abuse, for example, clients treated only for mental illness or co-dependence, were considered ineligible at all facilities.

**Estimates of Percentages
of Clients**

The estimates of the percentages of clients produced from the DSRS Client Data represent clients discharged from facilities reporting a drug treatment environment/modality in the 1989 NDATUS. The percentages represent clients nationwide discharged from these types of facilities (with 1989 hospital inpatient, residential, outpatient detoxification/maintenance, or outpatient drug free treatment modalities) to the extent that the NDATUS 1990 mailing list and the 1989 refined sampling frame represent drug treatment facilities nationwide. Excluded are clients discharged from facilities outside the coterminous United States or that reported only providing alcohol treatment, or were new or unknown to the 1989 NDATUS. In this report the estimates incorporate adjustment for non-response to DSRS by facilities and for client records that could not be located; the estimates are not adjusted for non-response to individual discharge abstract items.

Environment/Modality

For the purposes of this survey, drug treatment facilities were stratified based on plurality of clients reported in the 1989 NDATUS, according to provided environment (hospital inpatient, residential, and outpatient) and modality of treatment (detoxification, maintenance, and drug free). Four combinations were used as strata in sampling facilities:

Hospital Inpatient:

Detoxification and/or Drug-Free

Residential:

Detoxification and/or Drug-Free

Outpatient:

Detoxification and/or Maintenance

Drug-Free

Treatment Type

In this analysis, clients are categorized by type of treatment received. Two groups of clients were differentiated based on a review of several data items. Regardless of the setting in which treatment was provided, clients were designated alcohol only if: (a) the presenting problem at admission or the principal treatment focus was for alcohol abuse only, and (b) there was no history of ever using any drug other than alcohol. The DSRs discharge records were reviewed for drugs provided during treatment. All clients receiving methadone during treatment were given the methadone treatment type, regardless of the setting within which treatment was provided. Once the alcohol only and methadone treatment type clients were identified, the remaining discharged clients' treatment type was derived from the treatment setting, i.e., either hospital inpatient, residential, outpatient drug free, combined, or unknown.

Appendix II

Tables

List of DSRS Client-Data Tables, Final Analysis

Table 1	Number of Facilities in DSRS Sampling Frame, Completing Phase I Surveys, and Participating in Phase II, by Sampling Strata
Table 2	Number of DSRS Phase II Facilities, by Sampling Status and Response Status, and Number of Discharge Abstracts Completed, by Sampling Strata
Table 3	Number of DSRS Phase II Facilities and Number of Discharge Abstracts in Phase II Final Report by Sampling Strata
Table 4	Numbers of DSRS Discharge Abstracts in Treatment Type Categories by Location of Client Services
Table 5	Percentage Distribution of DSRS Discharge Abstracts by Sampling Strata, by Treatment Type
Table 6	Unweighted Percentage Distribution of DSRS Discharge Abstracts by Treatment Type, by Facility Ownership Status
Table 7	Weighted Percentage Distribution of Clients by Treatment Type, by Facility Ownership Status, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 8	Percentage Distribution of Clients by Selected Client Characteristics, for Alcohol Only and Drug or Drug and Alcohol Combined Clients, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 9	Percentage Distribution of Clients by Selected Treatment Characteristics, for Alcohol Only and Drug or Drug and Alcohol Combined Clients, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 10	Percentage Distribution of Clients by Primary Source of Referral, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 11	Percentage Distribution of Clients in Publicly-Owned Facilities, by Primary Source of Referral, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 12	Percentage Distribution of Clients in Private For-Profit Facilities, by Primary Source of Referral, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 13	Percentage Distribution of Clients in Private Non-Profit Facilities, by Primary Source of Referral, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 14	Percentage Distribution of Clients by Waiting Time for Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990

Table 15	Percentage Distribution of Clients in Publicly-Owned Facilities, by Waiting Time for Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 16	Percentage Distribution of Clients in Private For-Profit Facilities, by Waiting Time for Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 17	Percentage Distribution of Clients in Private Non-Profit Facilities, by Waiting Time for Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 18	Percentage Distribution of Clients by Age, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 19	Percentage Distribution of Clients by Race/Ethnicity, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 20	Percentage Distribution of Clients by Gender, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 21	Percentage Distribution of Clients by Education Category, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 22	Percentage Distribution of Clients by Years of Education, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 23	Percentage Distribution of Clients by Criminal Justice System Status, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 24	Percentage Distribution of Clients in Publicly-Owned Facilities, by Criminal Justice System Status, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 25	Percentage Distribution of Clients in Private For-Profit Facilities, by Criminal Justice System Status, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 26	Percentage Distribution of Clients in Private Non-Profit Facilities, by Criminal Justice System Status, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 27	Percentage Distribution of Clients by Medical and Psychosocial Characteristics, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 28	Percent of Clients with Prior Drug Treatment History and Characteristics of Treatment History, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 29	Percentage Distribution of Clients by Presenting Problem at Admission, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990

Table 30	Percentage Distribution of Clients by Drug Types Used in Last 30 Days Prior to Admission, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 31	Percentage Distribution of Clients by Drug Use in Last 30 Days Prior to Admission, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 32	Percentage Distribution of Clients by Intravenous Drug Use, Ever and at Admission, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 33	Percentage of Clients Tested for Substance Abuse and Percentage of Clients by Receipt of Services, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 34	Estimated Number of Clients Who Received Methadone and Characteristics of Methadone Treatment, by Location of Client Services, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 35	Percentage Distribution of Clients by Reasons for Discharge and Discharge Characteristics, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 36	Percentage Distribution of Clients by Primary Source of Payment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 37	Percentage Distribution of Clients in Publicly-Owned Facilities, by Primary Source of Payment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 38	Percentage Distribution of Clients in Private For-Profit Facilities, by Primary Source of Payment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 39	Percentage Distribution of Clients in Private Non-Profit Facilities, by Primary Source of Payment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 40	Percentage Distribution of Clients by Characteristics of Billed Charges, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 41	Statistics of Billed Charges of Clients, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 42	Statistics of Billed Charges of Clients Completing Planned Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 43	Statistics of Billed Charges of Clients Not Completing Treatment, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990
Table 44	Percentage Distribution of Clients by Post-Treatment Referrals, by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990

Table 1

Number of Facilities in DSRS Sampling Frame, Completing Phase I Surveys, and Participating in Phase II, by Sampling Strata

Sampling Strata	Number of Facilities in Sampling Frame	Phase I Sample		Phase I Completed Surveys		Phase II Respondents
		Number of Facilities in Released Phase I Sample	Number of Facilities Pre-Selected for Phase II Sample	Number of Facilities Total	Number of Facilities Pre-Selected for Phase II	Number of Facilities with Completed Discharge Abstracts
Hospital Inpatient	693	179	90	138	73	29
Residential	1,172	216	60	185	53	32
Outpatient:						
Detoxification or Drug Maintenance	467	103	57	80	45	31
Drug Free	2,953	526	87	372	62	28
Alcohol Treatment Only	1,291	187	0	91	N/A	N/A
New Facilities Since 1987 and Other Facilities with Unknown Environment/Modality	4,073	592	0	317	N/A	N/A
Total	10,649	1,803	294	1,183	233	120

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

N/A = Not Applicable.

Table 2

Number of DSRS Phase II Facilities, by Sampling Status and Response Status, and Number of Discharge Abstracts Completed, by Sampling Strata

Sampling Strata	Sampling Status		Participation Status			Abstracts
	Total Number of Phase I Respondents Pre-Selected for Phase II	Number of Pre-Selected Facilities Released for Phase II Contact	Number of Facilities Refusing	Response Rate (% of Released)	Number of Facilities with Completed Discharge Abstracts	Number of Abstracts Completed
Hospital Inpatient	73	40	11	72.5%	29	571
Residential	53	34	2	94.1%	32	615
Outpatient:						
Detoxification or Drug Maintenance	45	38	7	81.6%	31	549
Drug Free	62	34	6	82.4%	28	487
Total	233	146	26	82.2%	120	2,222

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Table 3

Number of DSRS Phase II Facilities and Number of Discharge
Abstracts in Phase II Final Report by Sampling Strata

Sampling Strata	Report Status	
	Number of Facilities	Number of Abstracts
Hospital Inpatient	28 ^a	551
Residential	31 ^b	595
Outpatient	31	549
Detoxification		
Drug Maintenance		
Drug Free	28	487
Total	118	2,182

Source: 1990 NIDA Drug Services Research Survey, Brandeis University,
Bigel Institute for Health Policy.

- a One alcohol only facility was dropped from this stratum.
- b One correctional facility was dropped from this stratum.

Table 4

Numbers of DSRS Discharge Abstracts in Treatment Type Categories by Location of Client Services

Location of Client Services	Treatment Type							All Treatment Types	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown	(#)	(%)
Hospital Inpatient	421	0	34	0	41	0	0	496	22.7
Residential	0	496	3	0	27	0	0	526	24.1
Outpatient Detoxification/Maintenance	0	0	248	1	4	0	0	253	11.6
Outpatient Drug Free	0	0	0	499	59	0	0	558	25.6
Alcohol Only	0	0	0	0	76	0	44	120	5.5
Combination	0	0	7	0	44	138	0	189	8.7
Unknown/Unable to Determine	0	0	0	0	4	0	36	40	1.8
Total Abstracts: #	421	496	292	500	255	138	80	2,182	100.0
(%)	19.3	22.7	13.4	22.9	11.7	6.3	3.7	100.0	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages may not total to 100.0% due to rounding.

Table 5

Percentage Distribution of DSRS Discharge Abstracts by Sampling Strata, by Treatment Type

Sampling Strata	Treatment Type							Total (#)	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Hospital Inpatient	67.2	0.2	5.8	1.5	12.5	12.7	0.2	100.0	551
Residential	3.5	75.6	0.5	5.9	6.7	4.5	3.2	100.0	595
Outpatient									
Detoxification or Drug Maintenance	5.3	2.4	46.5	25.9	8.7	6.7	4.6	100.0	549
Drug Free	0.2	6.6	0.4	64.7	20.1	0.8	7.2	100.0	487
All Strata	19.3	22.7	13.4	22.9	11.7	6.3	3.7	100.0	
(#)	421	496	292	500	255	138	80	2,182	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages may not total to 100.0% due to rounding.

Table 6

Unweighted Percentage Distribution of DSRS Discharge Abstracts by Treatment Type, by Facility Ownership Status

Treatment Type	Ownership Status			Unweighted Total	
	Public	Private For-Profit	Private Non-Profit	All Abstracts	(#)
Hospital Inpatient	28.1	22.7	16.4	19.3	421
Residential	13.6	12.1	27.7	22.7	496
Methadone	15.1	15.9	12.3	13.4	292
Outpatient Drug Free	15.4	23.9	24.4	22.9	500
Alcohol Only	13.9	10.6	11.5	11.7	255
Combination	5.1	12.1	5.0	6.3	138
Unknown	8.8	2.8	2.8	3.7	80
Total	100.0	100.0	100.0	100.0	
(#)	331	397	1,454		2,182
(%)	15.2	18.2	66.7		

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages may not total to 100.0% due to rounding.

Table 7

Weighted Percentage Distribution of Clients by Treatment Type, by Facility Ownership Status,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Treatment Type	Ownership Status			Weighted Total	
	Public	Private For-Profit	Private Non-Profit	All Clients	Sampling Error
Sample Size	331	397	1,454	2,182	N/A
Weighted Percent	28.5	12.3	59.2		
Hospital Inpatient	14.0*	23.5*	15.2*	15.9	3.4
Residential	20.2*	13.1*	30.8	25.6	5.5
Methadone	5.7*	7.8*	4.0*	4.9	0.9
Outpatient Drug Free	21.9*	35.7*	27.7	27.0	4.4
Alcohol Only	20.3*	9.3*	14.9	15.8	3.3
Combination	2.7*	8.9*	2.7*	3.4*	1.4
Unknown	15.2*	1.7*	4.7*	7.3*	2.9
Total	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages may not total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.

N/A = Not Applicable

Table 8

Percentage Distribution of Clients by Selected Client Characteristics,
for Alcohol Only and Drug or Drug and Alcohol Combined Clients,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Client Characteristics	Treatment Type		All Clients (\pm SE)	
	Alcohol Only	Drug or Combined Drug/Alcohol		
Sample Size	255	1,927	2,182	(\pm SE)
Age				
<18	4.0*	6.2	5.9	1.1
18-24	7.0*	19.3	17.4	2.4
25-34	24.3	47.0	43.4	1.5
35-44	28.0	21.5	22.5	1.9
45-64	28.0	5.5	9.0	1.1
65+	8.5*	0.3*	1.6*	0.8
Unknown/Not Mentioned	0.2*	0.1*	0.1*	0.1
Total	100.0	100.0	100.0	N/A
Gender				
Male	80.0	74.5	75.3	1.4
Female	20.0	25.5	24.6	1.4
Unknown/Not Mentioned	0.0	0.1*	0.1*	0.1
Total	100.0	100.0	100.0	N/A
Primary Referral Source				
Self	20.8*	28.6	27.3	3.5
Employer or EAP	2.5*	4.8	4.4	1.1
Criminal Justice System	36.5*	23.9	25.9	3.7
Health Care Providers	18.4*	13.3	14.1	2.7
Other Treatment Programs	9.5*	11.5	11.2	2.3
Other	10.2*	15.4	14.6	1.7
Unknown/Not Mentioned	2.1*	2.5	2.4	0.6
Total	100.0	100.0	100.0	N/A
DWI/DUI Arrests Prior to Admission				
No	27.3	37.4	35.8	3.9
Yes	53.2	28.1	32.1	3.1
Not Permitted to Abstract	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	19.5	34.5	32.1	4.4
Total	100.0	100.0	100.0	N/A
Receiving Drug Treatment as a Condition of Probation or Parole				
No	53.1	50.9	51.2	4.6
Yes	35.7*	22.4	24.5	3.6
Not Permitted to Abstract	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	11.1	26.7	24.3	3.8
Total	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 8 (Continued)

Percentage Distribution of Clients by Selected Client Characteristics,
for Alcohol Only and Drug or Drug and Alcohol Combined Clients,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Client Characteristics	Treatment Type		All Clients (± SE)	
	Alcohol Only	Drug or Combined Drug/Alcohol		
Sample Size	255	1,927	2,182	(± SE)
Percent with Chronic Medical Conditions at Admission	25.4	22.6	23.0	2.1
Percent with Substance Abuse/Mental Illness Diagnosis at Admission	7.1*	14.0	12.9	1.7
Percent Reporting Alcohol Use in the Last 30 Days	80.9	57.1	60.8	3.1
Ever Intravenous Drug Use:				
No	53.8	27.6	31.7	4.9
Yes	0.0	23.6	19.9	1.9
Unknown/Not Mentioned	46.2	48.8	48.4	5.9
Total	100.0	100.0	100.0	N/A
HIV or AIDS Status as Reported in Record				
Negative	8.0*	8.3*	8.3*	2.7
Positive	0.0	1.6	1.3	0.4
Other, Including Suspected	0.2*	2.3*	1.9*	0.6
Not Permitted to Abstract	1.9*	4.1*	3.7*	3.4
Unknown/Not Mentioned	89.9	83.8	84.7	4.5
Total	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 9

**Percentage Distribution of Clients by Selected Treatment Characteristics,
for Alcohol Only and Drug or Drug and Alcohol Combined Clients,
DSRS Clients Discharged September 1, 1989-August 31, 1990**

Treatment Characteristics	Treatment Type		All Clients ^a (± SE)	
	Alcohol Only	Drug or Combined Drug/Alcohol		
Sample Size	255	1,927	2,182	(± SE)
Percent Receiving Selected Services				
Testing for Substance Abuse	31.1*	44.9	42.7	6.1
Individual Counseling	80.9	79.3	79.5	3.6
Group Counseling	68.9	69.7	69.6	4.0
Family Counseling	24.3*	21.1	21.6	3.0
Drug Education Counseling	44.4	42.1	42.5	5.2
Detoxification	32.4*	36.1	35.5	4.7
Self-Help Groups	56.0	53.4	53.8	4.1
Average Length of Stay in Days	131.8	104.8	109.1	
Sampling Error	23.7	10.3	10.4	
Median Length of Stay in Days	64	47	49	
Reason for Discharge				
Completed Planned Treatment	53.6	47.3	48.3	4.1
Did Not Complete Treatment:				
Administration Choice	7.4*	9.8	9.4	1.7
Client Choice	27.9	30.4	30.0	3.7
Other	6.2*	7.9	7.6	1.6
Unknown/Not Mentioned	4.9*	4.6	4.7	1.1
Total	100.0	100.0	100.0	N/A
Primary Payment Source				
Public Subsidy	4.6*	4.2*	4.3*	2.0
Self-Pay	26.6*	22.1	22.8	5.9
HMO/Other Prepaid Plan	4.1*	4.4*	4.3*	1.8
Private Health Insurance	14.8	19.3	18.6	3.4
Medicaid	11.4	12.9	12.6	2.9
Medicare	6.0*	1.9	2.5	0.5
Other	22.4*	19.4	19.9	3.8
Not Permitted to Abstract	0.0	1.1*	0.9*	0.9
Unknown/Not Mentioned	10.1*	14.7*	14.0*	4.4
Total	100.0	100.0	100.0	N/A
Percent Billed Full Charges	47.9*	31.6	34.1	8.0
Mean Total Billed Charges: All Clients^b	1,414*	3,143	2,760	
Sampling Error	492	763	771	
Median Total Billed Charges	750	2,087	1,771	
Mean Total Billed Charges: Clients Who Completed Planned Treatment^c	1,798.9*	4,709.8	4,050.2*	
Sampling Error	800.8	1,376.2	1,384.9	
Median Total Billed Charges	750.0	6,000.0	6,000.0	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

- a This is based on 2,182 discharge records which were abstracted at a sample of 118 facilities included in the DSRS Phase II survey.
- b These statistics are based on 732 discharge records which were abstracted at a sample of 65 facilities included in the DSRS Phase II survey.
- c These statistics are based on 361 discharge records which were abstracted at a sample of 52 facilities included in the DSRS Phase II survey.
- * The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 10

Percentage Distribution of Clients by Primary Source of Referral, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Referral Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(+SE)
Self	42.7	22.1	52.8	19.7	20.8*	26.0	38.0*	27.3	3.5
Family	9.1	5.2*	0.9*	4.9*	3.2*	5.1*	0.0	4.8	0.8
Friend	2.5*	4.7*	3.7*	5.2*	2.8*	3.5*	2.2*	3.9	0.9
Clergy	1.2*	0.1*	1.2*	0.2*	0.0	0.3*	0.0	0.3*	0.1
School	0.2*	0.0	0.0	5.6*	0.3*	0.1*	2.5*	1.8*	0.9
Social Service Agency	1.1*	3.5*	12.8*	4.2	4.0*	2.6*	2.5*	3.8	0.5
Employee Assistance Program (EAP)	2.5*	5.1*	0.8*	1.8*	0.7*	5.5*	0.0	2.5*	1.0
Employer (Other Than EAP)	2.7*	0.4*	0.2*	2.7*	1.8*	3.8*	2.3*	1.9	0.5
Criminal Justice System, Court Order	4.2*	11.4*	3.9*	24.3	30.2*	16.2*	25.3*	17.5	3.6
Criminal Justice System, Voluntary	2.8*	2.4*	0.2*	1.1*	3.4*	1.2*	2.3*	2.1	0.5
Criminal Justice System, Unspecified	2.0*	7.3*	1.5*	10.7*	2.9*	5.4*	6.4*	6.3*	2.7
Health Care Providers	14.2*	20.1*	11.0*	7.7*	18.4*	12.2*	10.8*	14.1	2.7
Other Treatment Programs	10.3*	16.0*	7.4*	10.7*	9.5*	9.5*	4.9*	11.2	2.3
Unknown/Not Mentioned	4.4*	1.7*	3.6*	1.1*	2.1*	8.7*	2.7*	2.4	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 11

Percentage Distribution of Clients in Publicly-Owned Facilities, by Primary Source of Referral, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Referral Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	93	45	50	51	46	17	29	331	(± SE)
Self	30.5*	12.8*	58.1*	21.0*	16.6*	17.6	54.6*	26.9*	8.8
Family	6.1	6.9*	0.0	3.4*	2.0*	5.9	0.0	3.6*	1.1
Friend	2.9*	9.3*	0.0	0.0	0.0	0.0	3.8*	2.9*	0.9
Clergy	0.0	0.0	0.0	0.6*	0.0	0.0	0.0	0.1*	0.2
School	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Service Agency	1.4*	8.4*	3.5*	2.9*	2.8*	0.0	0.0	3.3*	1.8
Employee Assistance Program (EAP)	0.0	0.5*	0.0	0.5*	0.0	0.0	0.0	0.2*	0.2
Employer (Other Than EAP)	0.0	0.0	0.0	5.9*	0.0	0.0	3.8*	1.9*	1.3
Criminal Justice System, Court Order	3.9*	5.2*	10.2*	36.9	16.9*	41.2	3.9*	15.4*	6.2
Criminal Justice System, Voluntary	4.4*	1.0*	0.0	0.0	9.2*	0.0	3.9*	3.3*	1.2
Criminal Justice System, Unspecified	3.0*	0.0	1.0	20.7*	2.7*	17.6	10.7*	7.6*	7.1
Health Care Providers	30.8*	55.4*	23.4*	2.3*	35.5*	0.0	11.7*	26.3	6.7
Other Treatment Programs	8.4*	0.4*	3.8*	5.9*	13.5*	17.6	7.8*	7.1*	4.0
Unknown/Not Mentioned	8.8*	0.0	0.0	0.0	0.8*	0.0	0.0	1.4*	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 12

Percentage Distribution of Clients in Private For-Profit Facilities, by Primary Source of Referral, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Referral Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	90	48	63	95	42	48	11	397	(\pm SE)
Self	19.8*	1.4*	72.8*	24.9	24.9*	23.5*	11.2*	24.0	5.2
Family	20.6*	1.4*	0.8*	16.7	5.4*	0.4*	0.0	11.6	2.4
Friend	2.0*	0.0	4.1*	6.5*	9.3*	7.0*	0.0	4.6*	2.5
Clergy	0.6*	0.0	0.0	0.2*	0.0	0.0	0.0	0.2*	0.2
School	1.0*	0.0	0.0	2.0*	0.0	0.3*	0.0	1.0*	0.7
Social Service Agency	2.1*	0.0	0.0	7.5*	2.4*	0.0	0.0	3.4*	2.6
Employee Assistance Program (EAP)	3.2*	78.8	3.6*	7.8*	3.8*	15.1*	0.0	15.8*	8.5
Employer (Other Than EAP)	6.1*	3.5*	0.9*	4.2*	11.3*	7.0*	0.0	5.1	1.5
Criminal Justice System, Court Order	0.0	0.0	0.0	6.7*	15.1*	7.9*	39.9*	5.2*	2.5
Criminal Justice System, Voluntary	0.0	0.0	0.4*	4.2*	0.0	0.1*	0.0	1.6*	1.5
Criminal Justice System, Unspecified	0.0	0.0	4.2*	0.0	1.4*	0.0	0.0	0.5*	0.4
Health Care Providers	13.1*	1.4*	4.2*	3.6*	6.7*	8.4*	0.0	6.3*	2.2
Other Treatment Programs	27.8*	13.4*	8.0*	11.0*	7.6*	9.1*	7.8*	14.5*	4.3
Unknown/Not Mentioned	3.6*	0.0	0.9*	4.7*	11.9*	21.2*	41.1*	6.3	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 13

Percentage Distribution of Clients in Private Non-Profit Facilities, by Primary Source of Referral, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Referral Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	238	403	179	354	167	73	40	1,454	(\pm SE)
Self	55.4	26.8	41.0	17.9*	23.0*	31.7	14.2*	28.2	4.4
Family	6.7*	5.0*	1.6*	2.3*	3.6*	7.9*	0.0	4.0	1.0
Friend	2.6*	3.7*	6.2*	6.9*	3.8*	2.8*	0.0	4.3*	1.6
Clergy	1.9*	0.1*	2.4*	0.1*	0.0	0.7*	0.0	0.5*	0.2
School	0.0	0.0	0.0	8.6*	0.5*	0.0	6.6*	2.8*	1.6
Social Service Agency	0.6*	2.3*	24.5*	3.9	5.0*	5.5*	6.7*	4.1	1.1
Employee Assistance Program (EAP)	3.5*	0.1*	0.3*	0.7*	0.7*	1.6*	0.0	0.9*	0.3
Employer (Other Than EAP)	2.9*	0.2*	0.0	1.1*	1.8*	3.3*	0.2*	1.2*	0.4
Criminal Justice System, Court Order	5.7	14.3	1.1*	24.2	40.8*	9.9*	57.8	21.1	4.9
Criminal Justice System, Voluntary	3.0*	3.1*	0.3*	0.6*	0.2*	2.5*	0.1*	1.7*	0.6
Criminal Justice System, Unspecified	2.3*	10.2*	0.8*	9.8*	3.3*	3.3*	0.1*	6.8*	2.4
Health Care Providers	7.3	10.6	5.1*	10.9*	8.7*	20.5*	10.2*	9.9	1.8
Other Treatment Programs	5.5*	21.1*	9.7*	12.4*	7.1*	6.0*	0.1*	12.4	3.1
Unknown/Not Mentioned	2.8*	2.4*	7.1*	0.5*	1.8*	4.3*	4.1*	2.2*	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3 indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 14

Percentage Distribution of Clients by Waiting Time for Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Waiting Time	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
No Waiting Time	73.1	35.4	53.9	49.4	47.7	71.2*	50.2*	50.3	6.8
Waiting Less Than 7 Days	1.9*	4.1*	6.9*	3.3*	1.4*	2.8*	13.5*	3.9	1.1
Waiting 7 - 13 Days	0.8*	1.9*	0.9*	3.1*	3.5*	0.0*	7.4*	2.6*	1.2
Waiting 14 or More Days	0.0	2.5*	1.5*	6.0*	3.2*	0.0*	11.6*	3.7*	1.3
Unknown/Not Mentioned	24.1	56.0	36.9*	38.2	44.2*	25.9*	17.4*	39.5	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 15

Percentage Distribution of Clients in Publicly-Owned Facilities, by Waiting Time for Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Waiting Time	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	93	45	50	51	46	17	29	331	(\pm SE)
No Waiting Time	70.3*	22.5*	30.3*	22.5*	39.2*	0.0	65.7*	39.0*	15.9
Waiting Less Than 7 Days	2.6*	1.0*	3.5*	2.5*	0.0	0.0	18.5*	4.1*	2.3
Waiting 7 - 13 Days	3.2*	1.0*	0.0	2.5*	5.7*	0.0	3.8*	2.9*	2.0
Waiting 14 or More Days	0.0	0.0	0.0	10.4*	2.8*	0.0	11.1*	4.5*	3.8
Unknown/Not Mentioned	23.9*	75.4	66.3*	62.1*	52.2*	100.0	0.9*	49.4	19.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 16

Percentage Distribution of Clients in Private For-Profit Facilities, by Waiting Time for Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Waiting Time	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	90	48	63	95	42	48	11	397	(± SE)
No Waiting Time	84.1	81.7	89.2	48.7*	51.2*	85.6	41.1*	67.9	16.1
Waiting Less Than 7 Days	0.6*	16.2*	0.8*	0.5*	3.0*	6.2*	0.0	3.3*	3.4
Waiting 7 - 13 Days	0.0	2.1*	0.0	0.0*	0.1*	0.1*	3.7*	0.4*	0.4
Waiting 14 or More Days	0.0	0.0	0.0	0.0*	1.4*	0.1*	0.0	0.2*	0.2
Unknown/Not Mentioned	15.3*	0.0	10.0*	50.6*	44.3*	7.9*	55.2*	28.2*	16.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 17

Percentage Distribution of Clients in Private Non-Profit Facilities, by Waiting Time for Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Waiting Time	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	238	403	179	354	167	73	40	1,454	(± SE)
No Waiting Time	70.9	35.3*	56.0*	59.7*	52.8*	95.3	26.5*	52.1	9.8
Waiting Less Than 7 Days	2.0*	4.1*	11.7*	4.3*	2.2*	1.7*	6.6*	3.9*	1.6
Waiting 7 - 13 Days	0.0	2.2*	1.8*	4.2*	2.4*	0.0	13.2*	2.9*	1.9
Waiting 14 or More Days	0.0	3.5*	3.2*	6.0*	3.7*	0.0	13.2*	4.0*	1.5
Unknown/Not Mentioned	27.1*	54.9	27.3*	25.8*	38.9*	3.0*	40.4*	37.0	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 18

Percentage Distribution of Clients by Age, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Age in Years	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
<15	1.3*	0.6*	0.0	1.3*	1.4*	0.0	2.5*	1.1*	0.6
15-17	5.0*	4.1*	0.0	8.5*	2.6*	1.1*	2.3*	4.8	0.9
18-24	13.5	21.5	7.5	23.8	7.0*	18.7*	15.9	17.4	2.4
25-34	45.9	48.8	46.9	44.9	24.3	46.4	51.2	43.4	1.5
35-44	22.4	20.7	39.4	17.7	28.0	22.2	24.3	22.5	1.9
45-64	10.2	4.2	6.2	3.8	28.0	11.6*	2.8*	9.0	1.1
65+	1.7*	0.0	0.0	0.0	8.5*	0.0*	0.0	1.6*	0.8
Unknown/Not Mentioned	0.0	0.1*	0.0	0.0	0.2*	0.0	1.1*	0.1*	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 19

Percentage Distribution of Clients by Race/Ethnicity, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Race/Ethnicity	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
White, not Hispanic	69.0	60.5	49.9	61.9	52.9	65.0	48.6*	59.8	3.2
Black, not Hispanic	21.6*	36.8	32.1	25.9*	25.9*	7.9*	38.7*	28.6	3.5
Hispanic	7.2*	1.9*	16.3	2.7*	15.2*	4.7*	8.5*	6.3*	3.3
Asian or Pacific Islander	0.1*	0.1*	0.0	0.1*	0.0	0.0	0.0	0.1*	0.0
American Indian	1.3*	0.6*	0.1*	0.9*	0.4*	1.6*	2.1*	0.9	0.3
Alaskan Native	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.4*	0.0	0.5*	0.0*	0.0	0.0	0.0	0.1*	0.1
Unknown/Not Mentioned	0.3*	0.2*	1.1*	8.5*	5.5*	20.8*	2.1*	4.2*	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 20

Percentage Distribution of Clients by Gender, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Gender	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
Male	75.4	74.2	66.5	74.8	80.0	75.5	76.8	75.3	1.4
Female	24.6	25.8	33.5	25.2	20.0	24.5*	22.1	24.6	1.4
Unknown/Not Mentioned	0.0	0.0	0.0	0.0	0.0	0.0	1.1*	0.1*	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 21

Percentage Distribution of Clients by Education Category, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Education	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Less Than High School Graduate	30.3	37.7	35.2	44.2	53.2	26.5	46.7	40.9	3.2
High School Graduate/GED	28.3	36.1	31.3	28.6	22.6	35.8*	33.7*	30.3	2.0
Education Beyond High School	24.7	19.5	21.6	23.0	16.6	27.3	15.9*	20.9	2.0
Other/Unknown/Not Mentioned	16.8*	6.7*	11.9*	4.1*	7.6*	10.3*	3.7*	7.9	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 22

Percentage Distribution of Clients by Years of Education, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Education	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
Less Than 8 years	5.4*	0.8*	2.9*	3.1*	18.1*	3.9*	11.2*	5.9*	2.1
8-11 Years	23.3	34.7	31.9	39.6	34.7	19.8	33.2	33.5	2.8
Less Than High School Graduate, not Otherwise Specified	1.6*	2.1*	0.4*	1.4*	0.4*	2.8*	2.3*	1.5	0.4
High School Graduate/GED	28.3	36.1	31.3	28.6	22.6	35.8*	33.7*	30.3	2.0
Some College	17.7	14.8	18.4	19.3	13.1	24.2	15.5*	16.7	1.6
College Graduate	5.3	4.0*	1.8*	1.3*	2.2*	3.0*	0.5*	2.8	0.7
Post Graduate	1.7*	0.7*	1.4*	2.4*	1.3*	0.0*	0.0	1.4	0.4
Other	4.1*	4.5*	9.8*	2.7*	1.5*	0.4*	2.1*	3.4	0.7
Unknown/Not Mentioned	12.7*	2.2*	2.1*	1.4*	6.1*	10.0*	1.5*	4.5	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 23

Percentage Distribution of Clients by Criminal Justice System Status, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Criminal Justice System Status	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
DWI/DUI, Arrests Prior to Admission									
No	40.2	39.2	36.1	40.7	27.3	17.5*	23.2*	35.8	3.9
Yes	34.8	22.7	3.2*	28.2	53.2	47.9	39.5*	32.1	3.1
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	25.0	38.1	60.7	31.1	19.5	34.6	37.3*	32.1	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Other Arrests Prior to Admission									
No	28.7	24.3	21.1*	24.2*	43.4	16.8*	17.7*	27.1	4.8
Yes	46.8	60.9	64.3	55.0	26.9	50.5*	40.0	50.0	4.7
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	24.5	14.8*	14.7	20.7*	29.7	32.6*	42.2	22.9	4.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Prison or Jail Record Prior to Admission									
No	38.9	33.4	36.0	34.6	47.5	18.0*	20.4*	35.5	5.3
Yes	23.2	44.7	35.0	29.9	16.4	32.0*	25.3	30.5	3.6
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	37.9	21.9	29.0	35.6	36.1	50.0	54.3	34.1	4.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Receiving Drug Treatment as a Condition of Probation or Parole									
No	62.8	51.4	54.3	42.7	53.1	32.7*	59.4*	51.2	4.6
Yes	9.9	17.9	5.3	37.2	35.7*	17.5*	24.3*	24.5	3.6
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	27.4	30.7	40.5	20.0*	11.1	49.8	16.3*	24.3	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 24

Percentage Distribution of Clients in Publicly-Owned Facilities, by Criminal Justice System Status, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Criminal Justice System Status	Treatment Type							All Clients (\pm SE)	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	93	45	50	51	46	17	29	331	(\pm SE)
DWI/DUI Arrests Prior to Admission									
No	38.5	57.1*	20.3*	32.4*	28.9*	0.0	26.8*	35.1	7.7
Yes	30.5*	19.9	0.0	42.7*	49.2	58.8*	22.1*	32.6	9.2
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	31.0	23.0*	79.7	25.0*	21.9*	41.2*	51.1*	32.4*	13.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Other Arrests Prior to Admission									
No	22.9	44.4*	16.3*	30.1*	48.0*	11.8*	19.1*	32.6*	16.5
Yes	56.1	41.2*	64.0	68.2*	30.5*	82.4*	41.8*	49.5	11.9
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	20.9	14.4*	19.7	1.7*	21.6*	5.9*	39.1*	17.8*	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Prison or Jail Record Prior to Admission									
No	22.4*	56.4*	22.0*	48.4*	62.0	5.9*	26.8*	43.2*	17.5
Yes	31.2	25.9*	30.7	27.3*	11.7*	35.3*	30.6	25.3	6.9
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	46.5	17.7*	47.3	24.4*	26.3*	58.8*	42.6*	31.5*	11.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Receiving Drug Treatment as a Condition of Probation or Parole									
No	47.9	64.9*	27.9*	37.1*	68.4	0.0	80.9*	55.7	10.9
Yes	10.8*	9.1*	4.9*	56.5	27.0*	47.1*	7.4*	23.9	5.8
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	41.3	25.9*	67.2	6.4*	4.6*	52.9*	11.6*	20.4*	9.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 25

Percentage Distribution of Clients in Private For-Profit Facilities, by Criminal Justice System Status, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Criminal Justice System Status	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	90	48	63	95	42	48	11	397	(± SE)
DWI/DUI Arrests Prior to Admission									
No	42.7	43.6	59.1*	21.2*	26.6*	38.4	48.9*	34.6	8.7
Yes	21.2	30.3*	0.4*	22.4*	58.7	30.2	39.9*	25.8	4.0
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	36.0	26.1*	40.5*	56.4	14.8*	31.5	11.2*	39.5	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Other Arrests Prior to Admission									
No	31.5	41.5*	47.8*	19.5*	34.2*	31.3*	7.8*	29.6	8.0
Yes	35.7	44.4	45.2*	16.3	18.3*	40.0*	53.4*	29.7	6.1
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	32.8	14.1*	7.0*	64.3	47.5*	28.7*	38.8*	40.7	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Prison or Jail Record Prior to Admission									
No	39.1	54.2	59.6*	26.5*	46.8*	38.2*	41.1*	38.9	8.4
Yes	14.5*	24.1*	20.3*	4.7*	11.6*	33.1*	0.8*	13.9*	6.3
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	46.4	21.8*	20.1*	68.7	41.6*	28.7*	58.1*	47.3	9.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Receiving Drug Treatment as a Condition of Probation or Parole									
No	59.4	63.4*	74.2	29.6*	44.5*	61.2	3.7*	48.3	12.3
Yes	4.0*	6.3	5.0	6.7*	27.9*	0.9*	43.6*	8.0*	3.4
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	36.7	30.2*	20.7*	63.7*	27.5*	37.9	52.6*	43.8	9.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 26

Percentage Distribution of Clients in Private Non-Profit Facilities, by Criminal Justice System Status, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Criminal Justice System Status	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	238	403	179	354	167	73	40	1,454	(± SE)
DWI/DUI Arrests Prior to Admission									
No	40.1	33.2	37.9*	49.1	26.4*	11.6*	15.7*	36.4	5.3
Yes	41.1	23.0	6.6*	24.3*	55.0*	54.8*	66.5	33.1	4.6
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	18.8*	43.8	55.5	26.6	18.5*	33.6*	17.7*	30.4	4.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Other Arrests Prior to Admission									
No	30.3	16.5	13.6*	23.3*	41.6	9.4*	16.3*	23.9	3.7
Yes	46.3	68.5	72.1	60.4	25.6	42.6*	36.3*	54.4	5.4
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	23.4*	15.0*	14.3*	16.3*	32.8	48.0*	47.3	21.7	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Prison or Jail Record Prior to Admission									
No	46.1	24.3	36.1	31.5	38.2	10.0*	8.8*	31.1	3.8
Yes	22.5*	52.4	44.0	37.5	20.0	29.7*	18.8*	36.4	4.3
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	31.4	23.3	19.9*	31.0	41.8	60.3	72.4	32.6	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Receiving Drug Treatment as a Condition of Probation or Parole									
No	70.4	46.1	64.5	48.4	44.3*	28.8*	29.9*	49.7	5.9
Yes	11.3	21.6	5.6	38.1	42.4*	14.7*	49.2*	28.2	5.4
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	18.3*	32.2	29.9*	13.5*	13.3*	56.5*	20.8*	22.1	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 27

Percentage Distribution of Clients by Medical and Psychosocial Characteristics, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Medical and Psychosocial Characteristics	Treatment Type							All Clients (\pm SE)	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
Percent with Chronic Medical Conditions at Admission	29.2	19.4	31.1	20.2	25.4	23.2	22.4*	23.0	2.1
Percent with History of Psychological Disorder(s) at Admission	27.7	16.4	15.0*	18.7	8.9*	16.7	22.9	18.1	1.8
Percent with Substance Abuse/Mental Illness Diagnosis at Admission	22.8	10.4*	4.1*	13.0	7.1*	13.9	17.8	12.9	1.7
HIV or AIDS Status as Stated in Record									
Negative	19.9*	6.0*	9.5*	4.2*	8.0*	5.2*	7.0*	8.3*	2.7
Positive	1.2*	2.2*	6.9*	0.9*	0.0	0.0	0.0	1.3	0.4
Suspected	0.5*	0.0*	0.9*	0.7*	0.0	1.3*	0.0	0.4*	0.2
Not Permitted to Abstract	2.2*	5.8*	0.6*	5.8*	1.9*	0.0	0.0	3.7*	3.4
Other	2.3*	3.2*	2.9*	0.0	0.2*	1.0*	2.4*	1.6*	0.6
Unknown/Not Mentioned	73.9	82.7	79.2	88.4	89.9	92.6	90.5	84.7	4.5
Total	15.9	25.6	4.9	27.0	15.8	3.4*	7.3*	100.0	N/A
Percent Female	24.6	25.8	33.5	25.2	20.0	24.5*	22.1	24.6	1.4
Pregnancy Status of Female Clients at Admission as Stated in Record									
Pregnant	2.1*	5.4*	6.0*	6.9*	2.0*	0.0	0.0	4.3	1.3
Not Pregnant	49.0	66.4	46.4	13.1	54.7*	48.4*	20.5*	42.3	4.1
Unknown/Not Mentioned	48.9	28.2	47.6	80.1	43.3*	51.6*	79.5	53.4	4.2
Total	15.9	26.7	6.7	27.6	12.8	3.4*	6.9*	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 28

Percent of Clients with Prior Drug Treatment History and Characteristics of Treatment History, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Prior Treatment Characteristics	Treatment Type							All Clients
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown	
Sample Size	421	496	292	500	255	138	80	2,182
Percent of Clients with Prior Drug Treatment History	54.6	59.0	78.1	47.7	40.6	56.7	54.0	52.8 ^a
For Clients with Prior Drug Treatment History:								
Average Number of Past Treatment Episodes (for Any Substance Abuse) in the Twelve Months Prior to Admission	1.3	1.4	1.4	1.3	1.2	1.1	2.1*	1.4
Sampling Error	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.1
Average Number of Total Treatment Episodes (for Any Substance Abuse) Prior to Admission	2.0	2.2	3.4	2.1	2.6	2.3	2.3	2.3
Sampling Error	0.2	0.3	0.4	0.2	0.4	0.3	0.3	0.1
Average Number of Years Over Which Treatment Episodes Were Reported	4.5	2.9	5.9	2.4	4.2	1.8	2.1*	3.3
Sampling Error	0.7	0.5	0.6	0.7	0.9	0.5	2.5	0.3

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

* The Coefficient of Variation for this mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

^a The sampling error for this percentage is 2.7.

Table 29

Percentage Distribution of Clients by Presenting Problem at Admission, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Problem	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
Single Drug Abuse Only (excluding Alcohol)	9.5	18.5	37.9	17.8	0.0	7.7	15.2*	14.3	1.7
Polydrug Abuse Only (excluding Alcohol)	13.8	14.1	40.2	5.9	0.0	11.3*	4.6*	10.1	1.0
Alcohol Abuse Only	20.2	7.6*	0.1*	12.9	99.2	36.9*	52.6*	29.4	3.9
Combined Alcohol and Drug Abuse	51.8	56.8	17.7	56.2	0.0	41.7*	19.8*	41.7	2.8
Other	4.1*	0.3*	3.5*	5.7*	0.1*	0.2*	0.9*	2.5*	0.9
Unknown/Not Mentioned	0.5*	2.7*	0.6*	1.6*	0.6*	2.2*	6.9*	1.9*	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 30

Percentage Distribution of Clients by Drug Types Used in Last 30 Days Prior to Admission, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Type of Drug Used in Last 30 Days ^a	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Cocaine/Crack	41.6	54.6	39.3	21.1	0.0	28.6*	24.3*	31.0	3.0
Opiates (Heroin, Non-Treatment Methadone, Other Opiates/Synthetics)	14.4	8.5*	83.1	9.9*	0.0	6.1*	9.5*	12.1	1.8
Sedatives (Barbiturates, Benzodiazepines, Other Sedatives/Hypnotics)	12.5	6.6	13.1*	2.9*	0.0	5.8*	8.7*	6.0	0.7
Amphetamines (Methamphetamines, Other Amphetamines)	8.4*	4.0*	0.3*	1.2*	0.0	4.6*	0.0	2.9	0.7
Marijuana/Hashish/THC	38.0	28.9	11.1*	33.9	0.0	34.0*	17.2*	25.6	2.2
Hallucinogens (PCP, LSD, Other Hallucinogens)	3.7*	3.6	0.5*	2.8*	0.0	1.3*	0.0	2.3	0.5
Inhalants	1.5*	0.5*	0.0	0.1*	0.0	2.6*	0.0	0.5*	0.3
Over-the-Counter Drugs	5.1*	0.8*	10.4*	1.5*	0.0	0.0*	4.2*	2.2*	0.9
Alcohol	75.0	56.0	27.3	52.3	80.9	72.2	52.2	60.8	3.1
Other Drugs	9.5*	2.6*	5.7*	4.4*	0.0	9.1*	9.0*	4.6	0.8
No Drug Use Reported in the Last 30 Days	3.6*	17.8	11.8*	31.2	19.1	14.3*	23.3*	19.4	2.9

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

a Percentages will add to more than 100% because clients may have used more than one drug.

SE = Sampling Error

Table 31

Percentage Distribution of Clients by Drug Use in Last 30 Days Prior to Admission, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Drug Used in Last 30 Days ^a	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Cocaine (exclude Crack)	36.2	39.4	39.3	20.2	0.0	22.3*	24.3*	25.8	2.2
Crack	11.3*	23.8	0.0	1.7*	0.0	7.1*	0.0	8.6	2.1
Heroin	8.4*	6.3*	76.3	7.7*	0.0	3.6*	9.5*	9.6	1.7
Non-Treatment Methadone	0.8*	0.2*	8.4	0.7*	0.0	0.0	0.0	0.8	0.2
Other Opiates/Synthetics	7.4	2.2*	14.8	2.2*	0.0	3.8*	2.3*	3.4	0.5
Barbiturates	0.9*	1.2*	0.4*	0.1*	0.0	2.6*	0.0	0.6*	0.2
Benzodiazepines	12.2	3.2*	11.7*	2.6*	0.0	5.1*	8.7*	4.8	0.6
Other Sedatives/Hypnotics	1.1*	2.3*	1.4*	1.0*	0.0	0.4*	0.0	1.1*	0.4
Methamphetamines	6.4*	1.3*	0.0	0.8*	0.0	3.3*	0.0	1.7*	0.5
Other Amphetamines	2.2*	2.7*	0.3*	0.4*	0.0	2.1*	0.0	1.2	0.3
Marijuana/Hashish/THC	38.0	28.9	11.1*	33.9	0.0	34.0*	17.2*	25.6	2.2
PCP/LSD	3.5*	1.9*	0.5*	2.6*	0.0	1.3*	0.0	1.8	0.5
Other Hallucinogens	0.4*	1.9*	0.0	0.3*	0.0	0.0	0.0	0.6*	0.2
Inhalants	1.5*	0.5*	0.0	0.1*	0.0	2.6*	0.0	0.5*	0.3
Over-the-Counter Drugs	5.1*	0.8*	10.4*	1.5*	0.0	0.0*	4.2*	2.2*	0.9
Alcohol	75.0	56.0	27.3	52.3	80.9	72.2	52.2	60.8	3.1
Other Drugs	9.5*	2.6*	5.7*	4.4*	0.0	9.1*	9.0*	4.6	0.8
No Drug Use Reported in the Last 30 Days	3.6*	17.8	11.8*	31.2	19.1	14.3*	23.3*	19.4	2.9

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

a Percentages will add to more than 100% because clients may have used more than one drug.

SE = Sampling Error

Table 32

Percentage Distribution of Clients by Intravenous Drug Use, Ever and at Admission, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Intravenous Drug Use (IVDU) Status	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size, All Clients	421	496	292	500	255	138	80	2,182	(± SE)
Ever IVDU									
No	30.9	24.6*	5.0*	33.1	53.8	28.1*	25.7*	31.7	4.9
Yes	27.4	23.6	85.3	12.9	0.0	16.2*	16.7*	19.9	1.9
Unknown/Not Mentioned	41.7	51.8	9.8*	54.0	46.2	55.7*	57.7	48.4	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
IVDU At Admission									
No	44.5	39.0	15.7*	42.0	61.1	34.2*	34.2	42.5	4.9
Yes	14.3*	7.1	60.4	6.1*	0.0	4.7*	5.9*	9.3	1.1
Unknown/Not Mentioned	41.3	53.9	23.9	51.8	38.9*	61.1*	59.9	48.2	5.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A
Sample Size, IVDU Clients, Ever	98	125	248	58	0	15	12	556	
HIV or AIDS Status as Stated in Record for Clients with IVDU History									
Positive	1.0*	9.1*	8.1*	4.7*	0.0	0.0	0.0	5.5*	1.7
Negative	36.5*	12.3*	10.3*	6.8*	0.0	16.0*	0.7*	15.6	4.1
Suspected/Other/Unknown/Not Permitted to Abstract	62.4	78.6	81.6	88.5	0.0	84.0	99.3	78.8	3.8
Total	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	N/A
Sample Size, IVDU Clients, At Adm.	51	31	178	21	0	6	5	292	
Frequency of Intravenous Drug Use at Admission									
Daily	66.2	67.0	94.7	17.0*	0.0	42.9*	43.1*	65.3	7.7
Regularly But Not Daily	9.2*	10.5*	2.7*	49.5	0.0	1.9*	0.0	13.9*	5.6
Sporadically	6.3*	0.4*	0.0	0.3*	0.0	27.8*	0.0	2.1*	0.7
Unknown/Not Mentioned	18.3*	22.1*	2.6*	33.1*	0.0	27.4*	56.9*	18.6	4.3
Total	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 33

Percentage of Clients Tested for Substance Abuse and Percentage of Clients by Receipt of Services,
by Treatment Type, DSRS Clients Discharged September 1, 1989-August 31, 1990

Services ^a	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Tested for Substance Abuse	72.7	45.3	83.5	26.2	31.1*	76.4	11.1*	42.7	6.1
Individual Counseling	71.5	80.5	70.3	81.2	80.9	94.6	83.3	79.5	3.6
Group Counseling	79.8	83.9	22.9*	55.9	68.9	92.7	70.0	69.6	4.0
Family Counseling	44.3	15.6*	8.8*	15.0	24.3*	44.2*	10.3*	21.6	3.0
Drug Education Counseling	50.8	48.4	24.7*	27.0	44.4	66.7	56.9*	42.5	5.2
Employment Counseling	4.5*	8.9*	5.0*	1.5*	2.0*	0.8*	0.0	4.0*	1.3
Job Training	0.4*	3.4*	0.4*	1.4*	0.8*	0.7*	0.0	1.5*	0.6
Educational Classes	9.0*	15.4*	0.6*	2.9*	3.1*	26.7*	0.0	7.6*	2.4
Detoxification	69.6	39.4	65.0	3.1*	32.4*	69.7	37.8*	35.5	4.7
Activity Groups	62.9	50.1	4.2*	4.1*	30.9*	61.7	8.9*	31.8	4.8
Self-Help Groups (including AA and NA)	69.0	71.1	13.5*	28.6	56.0	81.1	62.3*	53.8	4.1
Day Care for Children	0.1*	0.0	0.0	0.3*	0.0	0.0	0.0	0.1*	0.1

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

^a Percentages will add to more than 100% because clients may have been given more than one type of service during treatment.

SE = Sampling Error

Table 34

Estimated Number of Clients Who Received Methadone and Characteristics of Methadone Treatment,
by Location of Client Services, DSRS Clients Discharged September 1, 1989-August 31, 1990

Methadone Treatment Characteristics	Location of Client Services		All Clients
	Hospital Inpatient	Outpatient Maintenance	
Sample Size	34	248	292
Clients Receiving Methadone:			
Average Daily Dosage (in mg.):			
First Treatment	25.9	31.5	29.8
Sampling Error	4.4	1.0	1.2
Last Treatment	10.8*	26.8	22.1
Sampling Error	4.2	4.7	3.6
Average Single Dose (in mg.):			
First Treatment	19.0	31.3	27.8
Sampling Error	1.8	1.1	2.2
Last Treatment	10.5*	26.2	21.6
Sampling Error	4.3	4.8	3.7
Percent Receiving One Dose Daily:			
First Treatment	66.5*	100.0	90.9
Last Treatment	92.8	100.0	98.1
Percent Receiving Methadone Supply to Take Away	0.0	45.2	32.5*
Average Length of Methadone Treatment in Days	9.5	407.3*	298.3*
Sampling Error	2.5	136.2	102.4

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

* The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3 indicating this number should be interpreted with caution.

Table 35

Percentage Distribution of Clients by Reasons for Discharge and Discharge Characteristics, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Discharge Characteristics	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Average Length of Stay in Days ^a	23.9	47.4	320.9*	177.9	131.8	38.3	100.2*	109.0	
Sampling Error	4.4	10.7	105.4	19.7	23.7	7.2	67.5	10.4	
Median Length of Stay in Days ^a	19	35	134	134	64	28	67	49	
Percent Discharged with Dual Diagnosis Substance Abuse/Mental Illness	19.6*	4.6*	5.2*	7.8*	7.0*	11.5*	14.8*	9.2	1.5
Percent Distribution of Reasons for Discharge:									
Completed Planned Treatment	58.3	61.7	31.5	24.1	53.6	65.3	60.7*	48.3	4.1
Did Not Complete Treatment:									
Referred to Another Program	12.9*	4.4*	10.1	4.5*	3.0*	1.5*	0.1*	5.4	1.4
Administration Choice	6.1	9.3	9.3*	12.2*	7.4*	8.2	11.0*	9.4	1.7
Client Choice	14.5	19.2	39.7	52.5	27.9	15.5*	23.6*	30.0	3.7
Incarcerated	0.0	0.8*	3.1*	2.5*	0.0	0.2*	2.7*	1.2*	0.4
Deceased	0.0	0.0	1.8*	0.0*	2.0*	0.0	0.0	0.4*	0.3
Other	0.3*	1.1*	0.3*	0.1*	1.2*	0.8*	0.1*	0.6*	0.2
Unknown/Not Mentioned	7.9*	3.5*	4.2*	4.1*	4.9*	8.4*	1.8*	4.7	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.

^a 417 valid cases were available for calculating length of stay for the hospital inpatient treatment type, 491 for residential, 287 for methadone, 482 for outpatient drug free, 243 for alcohol only, 132 for combination, 70 for unknown, and 2,122 for all clients.

SE = Sampling Error

N/A = Not Applicable

Table 36

Percentage Distribution of Clients by Primary Source of Payment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Payment Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Public Subsidy	0.6*	5.1*	4.2*	7.3*	4.6*	0.0	0.0	4.3*	2.0
Philanthropy	0.2*	3.9*	0.0	0.0	0.0	0.0	0.0	1.0*	1.0
No Payment, Unspecified	1.6*	1.2*	0.2*	0.4*	0.3*	0.0	1.1*	0.8*	0.4
Self-Pay	3.5*	26.0*	30.8*	30.3	26.6*	2.6*	22.1*	22.8	5.9
HMO/Other Prepaid Plan	9.7*	1.9*	1.9*	4.4*	4.1*	7.0*	2.1*	4.3*	1.8
Private Health Insurance	38.2	7.8*	4.4*	22.9	14.8	42.7*	4.4*	18.6	3.4
Medicaid	16.2*	5.6*	27.0*	12.4*	11.4	13.1*	23.0*	12.6	2.9
Medicare	5.9*	1.1*	1.7*	0.0	6.0*	2.6*	2.6*	2.5	0.5
Other Federal (DOD, Champus, VA)	4.5*	2.6*	1.5*	0.3*	2.5*	0.1*	0.0	1.9*	0.9
Social Services	0.2*	1.1*	1.4*	1.8*	0.5*	0.0	0.0	1.0*	0.3
Other	4.7*	18.8*	8.5*	11.7*	19.1*	3.6*	39.3*	15.1	3.7
Not Permitted to Abstract	0.0	3.6*	0.0	0.0	0.0	0.0	0.0	0.9*	0.9
Unknown/Not Mentioned	14.9*	21.4*	18.4*	8.4*	10.1*	28.4*	5.4*	14.0*	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 37

Percentage Distribution of Clients in Publicly-Owned Facilities, by Primary Source of Payment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Payment Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	93	45	50	51	46	17	29	331	(± SE)
Public Subsidy	2.0*	4.7*	2.6*	0.0	0.1*	0.0	0.0	1.4*	1.2
Philanthropy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No Payment, Unspecified	6.2*	0.4*	0.0	0.0	0.8*	0.0	0.0	1.1*	1.2
Self-Pay	2.3*	85.4	11.5*	54.8*	46.7*	0.0	15.5*	42.0*	18.2
HMO/Other Prepaid Plan	2.9*	0.0	0.0	0.3*	0.0	0.0	0.0	0.5*	0.4
Private Health Insurance	1.7*	1.6*	1.3*	19.2*	2.3*	0.0	3.8*	5.9*	2.3
Medicaid	11.4*	6.4*	29.1*	9.4*	14.9*	5.9	22.8*	13.3*	6.9
Medicare	1.4*	0.0	3.5*	0.0	7.2*	5.9	0.0	2.0*	1.3
Other Federal (DOD, Champus, VA)	15.5*	0.0	2.9*	0.0	3.4*	0.0	0.0	3.0*	2.1
Social Services	0.0	0.5	1.3*	0.0	0.0	0.0	0.0	0.2*	0.2
Other	0.2*	1.0*	1.3*	8.2*	11.4*	0.0	54.4*	12.7*	10.5
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	56.4*	0.0	46.7*	8.2*	13.3*	88.2	3.6*	18.0*	12.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 38

Percentage Distribution of Clients in Private For-Profit Facilities, by Primary Source of Payment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Payment Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	90	48	63	95	42	48	11	397	(± SE)
Public Subsidy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philanthropy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No Payment, Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Self-Pay	1.7*	7.8*	77.2*	6.6*	36.1*	1.3*	43.6*	14.0*	6.5
HMO/Other Prepaid Plan	1.3*	29.5*	3.6*	18.5*	3.0*	3.4*	0.0	11.6*	7.0
Private Health Insurance	74.0	57.0*	0.0	59.4*	42.5*	76.9	3.7*	56.9	10.1
Medicaid	10.7*	0.0	15.6*	2.8*	0.0	7.0*	3.7*	5.4*	3.7
Medicare	10.1*	0.0	0.0	0.0	0.0	0.0	0.0	2.4*	2.4
Other Federal (DOD, Champus, VA)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Services	0.0	0.0	2.8*	1.0*	7.0*	0.0	0.0	1.2*	1.2
Other	2.3*	5.6*	0.0	5.3	0.0	11.3*	7.8*	4.3	1.0
Not Permitted to Abstract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/Not Mentioned	0.0	0.0	0.9*	6.4*	11.5*	0.1*	41.1*	4.1*	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

N/A = Not Applicable

Table 39

Percentage Distribution of Clients in Private Non-Profit Facilities, by Primary Source of Payment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Primary Payment Source	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	238	403	179	354	167	73	40	1,454	(± SE)
Public Subsidy	0.2*	5.6*	7.1*	12.0*	8.1*	0.0	0.0	6.6*	3.5
Philanthropy	0.4*	5.4*	0.0	0.0	0.0	0.0	0.0	1.7*	1.7
No Payment, Unspecified	0.0	1.6*	0.4*	0.7*	0.0	0.0	2.8*	0.8*	0.4
Self-Pay	4.5*	8.9*	25.5*	27.3	12.3	4.7*	30.8*	15.4	3.6
HMO/Other Prepaid Plan	15.4*	0.0	2.6*	2.2*	6.9*	12.7*	5.6*	4.7*	2.0
Private Health Insurance	42.9	5.4*	8.3*	14.6	19.5	39.8	5.4*	16.8	2.6
Medicaid	20.0*	5.9*	30.2*	16.1*	10.5*	20.6*	24.8*	13.8	3.6
Medicare	6.5*	1.5*	1.2*	0.0	6.0*	2.8*	6.8*	2.8	0.7
Other Federal (DOD, Champus, VA)	1.0*	3.6*	1.2*	0.5*	2.3*	0.2*	0.0	1.8*	1.2
Social Services	0.3*	1.4*	0.9*	2.8*	0.0	0.0	0.0	1.3*	0.5
Other	7.5*	25.5*	16.9*	14.8	26.5*	0.0	18.2*	18.6	4.4
Not Permitted to Abstract	0.0	5.1*	0.0	0.0	0.0	0.0	0.0	1.6*	1.6
Unknown/Not Mentioned	1.3*	30.0*	5.8*	9.0*	7.9*	19.3*	5.6*	14.1*	4.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

NA = Not Applicable

Table 40

Percentage Distribution of Clients by Characteristics of Billed Charges, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Billed Charges	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(± SE)
Percentage Distribution of Characteristics of Billed Charges:									
No Charges	3.8*	5.0*	3.1*	10.4*	6.5*	1.0*	6.7*	6.4*	2.3
Full Amount Billed	40.6*	27.3*	18.5*	37.5*	47.9*	33.2*	13.0*	34.1	8.0
Sliding Fee Amount	0.3*	26.4*	2.3*	10.4*	19.2*	0.8*	15.4*	13.9*	4.5
Reduced Amount	7.0*	1.6*	2.0*	1.8*	0.5*	5.2*	32.5*	4.8*	2.6
Not Permitted to Abstract	9.7*	13.8*	4.8*	3.7*	0.6*	0.0	0.0	6.4*	3.8
Other	3.7*	7.6*	1.7*	5.8*	3.2*	15.9*	13.5*	6.2*	2.2
Unknown/Not Mentioned	34.9*	18.2*	67.6	30.4*	22.1*	44.0*	18.9*	28.1	6.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

NA = Not Applicable

Table 41

Statistics of Billed Charges of Clients, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Billed Charges	Treatment Type							All Clients ^a
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown	
Clients With Valid Billed Charges ^a								
Sample Size	206	321	87	269	157	86	47	1,173
Mean Total Billed Charges	\$7,348	\$1,862*	\$1,605*	\$669*	\$1,105*	\$4,709*	\$ 204*	\$2,173
Sampling Error	\$1,229	\$575	\$1,171	\$247	\$345	\$2,099	\$ 251	\$481
Median Total Billed Charges	\$6,455	\$1,878	\$480	\$237	\$449	\$1,088	\$75	\$805
Mean Per Diem Charges ^b	\$455	\$86	\$62*	N/A ^c	\$69*	\$311	\$13*	\$118 ^f
Sampling Error	\$68	\$22	\$29		\$23	\$25	\$5	\$28
Clients Billed Full Amount ^c								
Sample Size	174	162	57	157	100	70	12	732
Mean Total Billed Charges	\$7,032	\$3,108*	\$2,017*	\$784*	\$1,414*	\$5,374	\$450*	\$2,760
Sampling Error	\$1,011	\$1,239	\$2,095	\$345	\$492	\$489	\$400	\$771
Median Total Billed Charges	\$6,634	\$5,073	\$805	\$420	\$750	\$1,130	\$233	\$1,771
Mean Per Diem Charges ^d	\$476	\$137*	\$81*	N/A ^c	\$92*	\$406*	\$36*	\$157* ^f
Sampling Error	\$85	\$48	\$55		\$41	\$144	\$44	\$52

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

- * The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.
- a Includes charges billed to clients characterized as the full amount the facility charges for the services, sliding fee amounts, reduced amounts, or other. Charges of \$0 are excluded.
- b Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes are: hospital inpatient (n=205), residential (n=319), methadone treatment (n=84), alcohol only (n=145), combination (n=80), unknown (n=39) and all clients (n=1,137).
- c Only for charges billed to clients characterized as the full amount the facility charges. Charges of \$0 are excluded.
- d Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes are: hospital inpatient (n=173), residential (n=162), methadone treatment (n=55), alcohol only (n=94), combination (n=64), unknown (n=8), and all clients (n=710).
- e N/A = Not applicable. Mean per diem charges for outpatient drug free clients have not been calculated because the actual number of days in which visits were made to the treatment program is unknown.
- f Includes clients in outpatient drug free treatment type.

Table 42

Statistics of Billed Charges of Clients Completing Planned Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Billed Charges	Treatment Type							All Clients ^a
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown	
Clients Completing Planned Treatment With Valid Billed Charges ^a								
Sample Size	127	204	12	82	87	39	27	578
Mean Total Billed Charges	\$9,259	\$2,208*	\$2,616*	\$816*	\$ 1,197*	\$5,594*	\$197*	\$2,792
Sampling Error	\$1,384	\$828	\$2,777	\$348	\$623	\$2,259	\$404	\$731
Median Total Billed Charges	\$9,413	\$4,030	\$753	\$282	\$550	\$3,774	\$55	\$2,517
Mean Per Diem Charges ^b	\$449	\$85	\$96*	N/A ^c	\$65*	\$284	\$15*	\$127 ^d
Sampling Error	\$86	\$25	\$142		\$35	\$62	\$10	\$31
Clients Completing Planned Treatment Billed Full Amount ^a								
Sample Size	105	104	10	53	52	30	7	361
Mean Total Billed Charges	\$9,011	\$3,852*	\$2,995*	\$1,032*	\$1,799*	\$6,485	\$775*	\$4,050*
Sampling Error	\$1,011	\$1,880	\$3,022	\$555	\$801	\$638	\$680	\$1,385
Median Total Billed Charges	\$9,858	\$6,143	\$753	\$795	\$750	\$6,250	\$300	\$6,000
Mean Per Diem Charges ^d	\$486	\$139*	\$116*	N/A ^c	\$107*	\$338*	\$85*	\$194* ^f
Sampling Error	\$118	\$57	\$165		\$51	\$102	\$77	\$71

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

- * The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.
- a Includes charges billed to clients characterized as the full amount the facility charges for the services, sliding fee amounts, reduced amounts, or other. Charges of \$0 are excluded.
- b Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes for clients completing planned treatment are: hospital inpatient (n=126), residential (n=203), methadone treatment (n=12), alcohol only (n=80), combination (n=39), unknown (n=22) and all clients (n=562).
- c Only for charges billed to clients characterized as the full amount the facility charges. Charges of \$0 are excluded.
- d Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes for clients completing planned treatment are: hospital inpatient (n=104), residential (n=104), methadone treatment (n=10), alcohol only (n=49), combination (n=30), unknown (n=3), and all clients (n=352).
- e N/A = Not applicable. Mean per diem charges for outpatient drug free clients have not been calculated because the actual number of days in which visits were made to the treatment program is unknown.
- f Includes clients in outpatient drug free treatment type.

Table 43

Statistics of Billed Charges of Clients Not Completing Treatment, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Billed Charges	Treatment Type							All Clients ^a
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown	
Clients Not Completing Treatment With Valid Billed Charges^a								
Sample Size	79	117	75	187	70	47	20	595
Mean Total Billed Charges	\$4,851	\$1,231*	\$1,331*	\$608*	\$977	\$3,102	\$228*	\$1,455
Sampling Error	\$901	\$413	\$964	\$223	\$288	\$467	\$104	\$321
Median Total Billed Charges	\$3,883	\$782	\$455	\$210	\$438	\$555	\$76	\$500
Mean Per Diem Charges ^b	\$463	\$88*	\$52*	N/A ^c	\$73*	\$367	\$6*	\$107* ^f
Sampling Error	\$71	\$32	\$16		\$34	\$88	\$5	\$33
Clients Not Completing Treatment Billed Full Amount^a								
Sample Size	69	58	47	104	48	40	5	371
Mean Total Billed Charges	\$4,677	\$1,694	\$1,717*	\$689*	\$1,071*	\$3,919	\$179*	\$1,655
Sampling Error	\$750	\$390	\$1,888	\$321	\$389	\$771	\$165	\$463
Median Total Billed Charges	\$3,891	\$1,000	\$805	\$385	\$740	\$800	\$114	\$840
Mean Per Diem Charges ^d	\$464	\$133*	\$70*	N/A ^c	\$79*	\$512*	\$2	\$126* ^f
Sampling Error	\$77	\$48	\$25		\$44	\$167	\$0	\$50

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

- * The Coefficient of Variation for this estimate or mean is greater than or equal to 0.3, indicating this number should be interpreted with caution.
- a Includes charges billed to clients characterized as the full amount the facility charges for the services, sliding fee amounts, reduced amounts, or other. Charges of \$0 are excluded.
- b Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes for clients not completing treatment are: hospital inpatient (n=79), residential (n=116), methadone treatment (n=72), alcohol only (n=65), combination (n=41), unknown (n=17) and all clients (n=575).
- c Only for charges billed to clients characterized as the full amount the facility charges. Charges of \$0 are excluded.
- d Clients who were missing admission and/or discharge dates were excluded. The effective sample sizes for clients not completing treatment are: hospital inpatient (n=69), residential (n=58), methadone treatment (n=45), alcohol only (n=45), combination (n=34), unknown (n=5), and all clients (n=358).
- e N/A = Not applicable. Mean per diem charges for outpatient drug free clients have not been calculated because the actual number of days in which visits were made to the treatment program is unknown.
- f Includes clients in outpatient drug free treatment type.

Table 44

Percentage Distribution of Clients by Post-Treatment Referrals, by Treatment Type,
DSRS Clients Discharged September 1, 1989-August 31, 1990

Post-Treatment Referrals	Treatment Type							All Clients	
	Hospital Inpatient	Residential	Methadone	Outpatient Drug Free	Alcohol Only	Combination	Unknown		
Sample Size	421	496	292	500	255	138	80	2,182	(\pm SE)
No Post-Treatment Referral	24.8	26.4	32.3*	58.8	58.6	14.7*	39.7*	40.8	4.6
Hospital Inpatient	4.8*	2.0*	1.7*	1.7*	1.3*	1.3*	0.1*	2.1*	0.7
Residential	10.0*	12.2*	1.5*	3.4*	3.9*	1.4*	18.2*	7.7	2.2
Outpatient/Methadone Maintenance	0.0	0.6*	16.1	0.2*	0.0	0.0	0.0	1.0	0.2
Other Outpatient	28.7	14.2*	7.3*	2.8*	18.0*	18.3	13.9*	13.8	3.0
Other	16.0	17.4	9.2*	6.7*	6.1*	11.7*	6.3*	11.1	1.9
Unknown/Not Mentioned	15.6	27.1	31.8	26.4	12.0*	52.7*	21.8*	23.4	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Bigel Institute for Health Policy.

Note: Percentages will not always total to 100.0% due to rounding.

* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

SE = Sampling Error

NA = Not Applicable

Appendix III
Methodological Memoranda

Phase II - Administrator and Client Record Weights*

* Source: Data File Documentation: Appendix B. Prepared for the National Institute on Drug Abuse by the Institute for Health Policy at Brandeis University and Westat, Inc., November 19, 1992.

Appendix B
Phase II - Administrator and Client Record Weights

Phase II (site visits) of the NIDA drug treatment survey included data collection for two separate samples: 1) the facility administrator sample and 2) a sample of discharged client records selected within the visited facilities. We therefore produced two sets of weights, one set of weights for the estimation of characteristics of the visited facilities and another set for estimation of characteristics of discharged client records. Sampling weights were computed based on the specifications described in the following sections.

1. Administrator Weights

A subsample of facilities was preselected to provide about 120 visitation facilities with about equal samples from the four treatment modality strata, that is, 30 from each modality. Table 7 provides the number of preselected facilities for visitation, and the number of facilities that participated in Phase I of the survey. These facilities were sampled from the first four sampling strata, waves one through three of the first half-sample.

Table 7. Number of preselected facilities for visitation sample and number of facilities that participated in Phase I of the survey.

Sampling Strata	No. of preselected facilities for the visitation sample	No. of facilities in the visitation sample
1. Hospital Inpatient	90	73
2. Residential	60	53
3. Outpatient Detox/Maint.	57	45
4. Outpatient Drug Free	87	62
5. Alcohol Only	0	0
6. Unknown	0	0

The sample facilities given in Table 7 were preselected to provide the required number of visitation facilities based on the nonresponse rates observed for the pilot study.

However, nonresponse rates for the main study were different than those observed in the pilot study. The study design required about 30 completed interviews within each of the four strata. With the main study response rates, it was expected that the above sample would produce many more than 30 completed interviews per stratum. Therefore, the sample of preselected facilities for visitation was divided into sampling waves (by introducing another stage of sampling) to achieve a sample that provided the required number of visitation facilities within each stratum. Different waves were released for different strata depending on the response rate observed within each stratum.

The base weight for the j th administrator in the i th stratum was computed as

$$W_{v1ij} = W_{Bij} * \frac{1}{P_{vij}}$$

where

W_{Bij} = the base weight associated with the j th facility in the i th stratum

P_{vij} = the probability that the j th facility in the i th stratum was selected for visitation

P_{vij} includes the probability of selecting the j th facility from the main sample including the number of waves released for visitation.

The final administrator weights included nonresponse adjustments by stratum similar to the main facility sample. Adjustments were made for those facilities that responded to the main sample but did not participate in the administrator survey. The final nonresponse adjusted administrator weight was computed as

$$W_{v2ij} = W_{v1ij} * \frac{\sum W_{1vij}}{\sum_{(B'C)} W_{1vij}}$$

where Σ is the sum over those facilities that were selected for visitation (and part of the waves that were released for interview) and were eligible for the main sample, and Σ is the sum over those that responded to the administrator survey.

As noted earlier, the visitation facilities were preselected from sampling strata 1 through 4 to satisfy the tight time schedule planned for data collection. As a result, the total sampling weights for the visitation facilities is equal to an estimate of the total number of facilities in sampling strata 1 to 4, rather than the total number of eligible facilities in the targeted universe (including eligible facilities in sampling strata 5 and 6).

2. Sample Weights for Client Records

Note that the final sampling weights given in the above equation are at the facility level, that is, they can be used to estimate facility characteristics, rather than client record characteristics. Sample weights for client record statistics further adjusted for probabilities of selection of the client records and client record nonresponse. That is, within those facilities that responded to the administrator survey, adjustments were made for those eligible client records that were sampled but for which no information was collected.

The base weight for the k th client record in the j th visitation facility in the i th stratum was computed as

$$W_{c1ijk} = W_{v2ij} * \frac{1}{P_{cijk}}$$

where

W_{v2ij} = the final nonresponse adjusted administrator weight for the j th visitation facility in the i th stratum

P_{cijk} = the probability that the k th client record from the j th facility in the i th stratum was selected for visitation

The final client record included nonresponse adjustments, i.e., adjustments for the client records that were missing. The final nonresponse adjusted client record weight was computed as

$$W_{c2ijk} = W_{c1ijk} * \frac{\sum W_{c1ijk}}{\sum_{(B'C)} W_{c1ijk}}$$

where $\sum_{(A'C)}$ is the sum over the eligible client records selected in the sample, and $\sum_{(B'C)}$ is the sum over those client records for which data were collected.

The client records in the sample were mainly divided into the following groups:

- (1) client records that were determined to be ineligible at the screening time (includes duplicate cases),
- (2) client records that were determined to be eligible and were abstracted, and
- (3) client records with missing information.

Eligibility status could not be determined for those clients with missing records. We, therefore, assumed that the eligibility rate among clients with missing records was the same as those with known eligibility within each of the visited facilities. For example, we assumed an eligibility rate of 90 percent among those clients with missing data in a facility if 90 percent of client records with known eligibility were actually eligible within the facility.

The final nonresponse adjusted client record weights were poststratified so that the sum of the weights would add to a control total of 2222. The poststratified weight was computed as follows:

$$W_{c3ijk} = \frac{W_{c2ijk}}{\sum_i \sum_j \sum_k W_{c2ijk}} \times (2222)$$

where

W_{c2ijk} = The final nonresponse adjusted client record weight for the kth client in the jth visitation facility in the ith stratum

The client record weights were poststratified to this control count because, similar to the visitation facility sample, the client records were selected from sampling strata 1 to 4 rather than the entire targeted universe.

MEMORANDUM

January 15, 1991

TO: Helen Batten

FROM: Paul Hurwitz

SUBJECT: Drug Services Research Survey Phase II (Site Visits):
Report on Final Results

1. GENERAL RESULTS

The objective of Phase II of the Drug Services Research Survey was to conduct a site visit at 120 drug abuse treatment facilities. During each site visit, there were three types of tasks to accomplish. These three tasks were:

1) conducting an in-person interview with the facility Director or Administrator,

2) compiling a sampling frame of all drug abuse client discharge records for the twelve-month period from September 1, 1989 to August 31, 1990 and selecting a random sample of 21 discharge records (randomly designating one as an alternate),

and

3) completing an abstract form from 20 of the sampled discharge records, if the clients are eligible for the study.

The particular facilities included in Phase II of the study were determined through a process that began before Phase I was conducted. Facilities sampled for Phase I were randomly pre-selected for inclusion in Phase II. The objective of Phase II was to visit approximately 30 facilities from each of the four drug treatment sampling strata from Phase I. Pre-selection rates, which varied across these four strata, were designed to meet this objective after allowing for expected ineligibility and non-response during Phase I, as well as non-response during Phase II.

Expected ineligibility and non-response rates were based on the results of the pilot study. However, as things turned out, the ineligibility rate was lower and the response rate was higher than those experienced in the pilot study. As a result, 233 facilities that were pre-selected for Phase II were eligible respondents in Phase I. Since only 120 site visits were to be

conducted, sub-sampling was necessary to randomly determine which facilities would be pursued for site visits.

To accomplish this, the facilities were assigned to random sub-samples (waves) within each of the four strata. The facilities were entered into the study by releasing these waves of facilities as needed, depending on the non-response rate within each stratum. Initially, 136 facilities (34 from each strata) were entered into the study, which allowed for 11% non-response within each strata. Because non-response varied between the four strata, additional facilities from some strata were eventually entered into the study. In total, 146 facilities were included in Phase II of the study. The following table shows the number of facilities and the response rate in each of the four strata:

	STRATA				TOTAL
	HIP	RES	OPDM	OPDF	
SITE VISITS ATTEMPTED	40	34	38	34	146
REFUSALS	11	2	7	6	26*
SITE VISITS CONDUCTED	29	32	31	28**	120
RESPONSE RATE	72.5%	94.1%	81.6%	82.4%	82.2%

* Two facilities (1 HIP and 1 OPDF) agreed to participate but refused to allow a visit within the study time-frame.

** The material from one OPDF facility was lost in the mail.

Explanation of Strata Abbreviations:

HIP = hospital in-patient

RES = residential

OPDM = out-patient detoxification and maintenance

OPDF = out-patient drug-free

We recruited, hired and trained twenty-four abstractors to conduct the multiple tasks involved in these site visits. The abstractors completed 120 site visits in 38 states. The distribution of the states in which the 120 facilities that we visited are located is shown in the following table:

<u>STATE</u>	<u>NUMBER OF FACILITIES</u>	<u>STATE</u>	<u>NUMBER OF FACILITIES</u>
AL	2	MS	1
AZ	2	NC	2
CA	7	NH	2
CO	4	NJ	3
CT	3	NM	1
DE	1	NY	9
FL	2	OH	5
GA	2	OK	1
IA	1	OR	2
IL	10	PA	3
IN	3	RI	2
KS	1	SC	1
KY	2	TN	1
LA	3	TX	7
MA	7	UT	1
MD	6	VA	1
MI	10	WA	4
MN	3	WI	2
MO	2	WY	1

At each of the 120 facilities, an interview was conducted with the facility Director or Administrator, a discharge record sampling frame was compiled, a sample of discharge records was selected, and eligible sampled records were abstracted. Therefore, we successfully achieved the objectives of Phase II of the Drug Services Research Survey, and attained a facility response rate of 82.2%.

The major disappointment of this phase of the study was due to the loss in the mail of the package of materials from one site visit. All packages were sent to Westat using the Express Mail overnight delivery service offered by the U.S. Post Office. The loss of the package was immediately investigated and efforts to locate the package continue. As a result of this unfortunate loss, data are available for only 119 of the 120 site visits that were conducted.

2. SCHEDULING SITE VISITS

Each site visit was scheduled to be five days in duration. In order to meet our data delivery deadline for providing keyed and edited data, we had to negotiate with facility directors for access, schedule each site visit, and conduct all site visits by early December. Working with the facility Directors' schedules, the study schedule, and the abstractors' schedules, 119 site visits were successfully scheduled over an eight week period (excluding Thanksgiving week) from October 8 through December 7. Therefore, the schedule averaged 15 site visits per week. Because

of facility non-response late in the field period, and because negotiations for access at some facilities were very lengthy and continued until late in the field period, replacement facilities were being released and site visits were being scheduled throughout almost the entire field period. Due to multiple delays in gaining access at one facility, the final site visit could not be scheduled until the week of December 10-14.

The negotiating and scheduling of 120 site visits in 38 different states over such a short time-period while making abstracting assignments in a geographically efficient manner and while avoiding more overlap in terms of time and location than could be accommodated by the abstractors, was the most challenging and one of the more time-consuming management tasks of this study.

After obtaining access from the facilities, explaining to the Directors what would be done during the visits, scheduling the visits, and setting up appointments for interviews with the Directors or Administrators, we followed up by sending a letter to each facility. The letter confirmed the dates of the site visit, the date and time of the appointment with the Director/Administrator for the interview, and the name of the person to be interviewed. The letter also included a review of the other tasks that the abstractors would be completing during the five-day visit, and it identified the abstractor(s) who would be visiting.

3. INTERVIEWING DIRECTOR OR ADMINISTRATOR

The interview with the Director or Administrator required a minimum of 5 minutes and a maximum of 1 hour and 40 minutes. Since the questionnaire was sent to the facilities before the site visit, some respondents completed the questionnaire before the abstractors arrived resulting in a very short interview. On the average, the interview required 29 minutes.

Data from the Administrative Questionnaire are available from 119 facilities.

4. SAMPLING CLIENT DISCHARGE RECORDS

We worked with each facility to compile a sampling frame containing all drug abuse treatment clients discharged from the facility from September 1, 1989 through August 31, 1990. The number of discharges on the frames we compiled ranged from 4 to 1,615 with an average of 273 discharges. We attempted to sample 21 discharge records at each facility. At the 119 facilities from which we have data, the total number of records we attempted to sample was 2,499. The sampling frame at six facilities contained fewer than 21 discharges, so we were unable to sample 21 records. At these facilities, all discharges on the frame were selected.

The insufficient number of discharges at these six facilities resulted in a total loss of 44 discharge records.

The average time required for compiling a sampling frame and selecting a sample was 2.7 hours. Excluding facilities at which sampling was not performed due to an insufficient number of discharges (less than 21), the time ranged from about one-half hour to sixteen hours.

The major problems encountered involved our attempts to "clean" the sampling frame before selecting the sample. We requested a list of clients who were discharged from 9/1/89 through 8/31/90 even if they died while in treatment or did not complete treatment for any reason. Clients who were discharged more than once during that time period were expected to be on the frame more than once. We requested that clients be excluded from the list, if possible, if they were treated for alcohol abuse only, were admitted and discharged on the same day, or were discharged without ever having received any treatment. We also requested the exclusion of clients who were discharged from a different service unit (other than the one we had sampled). These inclusions and exclusions were often not possible because such clients could not be identified from the facility discharge lists. As a result, sampled clients were found to be ineligible after the treatment records were obtained and reviewed. Since we did not complete an abstract form for clients who were ineligible, the number of records abstracted was reduced as a result of these problems.

The worst example deals with the clients treated for alcohol abuse only. Only eight facilities indicated that they were able to exclude such clients from the sampling frame, but at two of these eight facilities "alcohol only" clients ended up in our sample. It is possible that this exclusion was not made or was incomplete at some of the other six facilities that told us they had made the exclusion, and that only by chance none of the "alcohol only" clients ended up in our sample.

5. ABSTRACTING CLIENT TREATMENT RECORDS

Treatment records were abstracted for clients who were sampled, who had treatment records available, who were discharged during the twelve-month period of interest, and who were treated for substance abuse.

Abstract data are available from 119 facilities. The following table indicates the outcome of abstracting at these 119 facilities:

TOTAL DISCHARGES ATTEMPTED TO SAMPLE	2,499 (100%)

Sampled	2,455 (98.2%)
Not sampled (insufficient discharges)	44 (1.8%)

TOTAL RECORDS REQUESTED TO BE PULLED	2,455 (100%)

Records attempted to abstract	2,418 (98.5%)
Alternates that were not needed	37 (1.5%)

TOTAL RECORDS ATTEMPTED TO ABSTRACT	2,418 (100%)

Abstract completed	2,207 (91.3%)
Ineligible (see reasons below)	160 (6.6%)
Record not available	48 (2.0%)
Duplicate	3 (0.1%)

Reasons for ineligibility:

<u>Total Ineligible</u>	<u>160 (100%)</u>
No treatment administered*	84 (52.5%)
Discharged outside of time-frame	42 (26.2%)
Client not treated for substance abuse**	30 (18.8%)
Unknown reasons	4 (2.5%)

* Client was referred elsewhere or never showed up for treatment

** Client treated for mental illness or co-dependence

A total of 2,207 client discharge records were abstracted at the 119 facilities for an average of 18.6 abstracts per facility. The time required to abstract a record ranged from 8 minutes to 5.4 hours, with an average of slightly less than one hour (57 minutes).

The abstractors sometimes worked individually and other times they worked in teams of two. A random sub-sample of records were re-abstracted for quality control. The re-abstracting was completed independently by a second abstractor and the two completed abstracts were compared to identify and resolve any discrepancies. At facilities where only one abstractor was assigned, a second abstractor was sent out for one or two days to conduct quality control. The objective was to re-abstract 10% of all abstracted records. Initially, quality control was performed on 40% of completed abstracts. Quality control re-abstracting

continued, but the rate decreased and varied between abstractors depending on the demonstrated quality of their work. In total, 9.3% of the abstracts (206/2,207) were re-abstracted for quality control.

6. EVALUATING FACILITIES

After the site visits, the abstractors evaluated each facility and completed a facility assessment form. These forms were sometimes completed over the telephone with the Westat field management staff, and other times they were completed by the abstractors and mailed back. The ratings were subjective and a choice of five categories was offered. The evaluations were divided into two main subject areas (facility staff cooperation and quality of treatment records), and each main subject area was divided into three more specific subject areas. These forms were completed for 120 facilities. The table below shows the percent of the facilities that was assigned to each rating category in each of the six subject areas.

SUBJECT AREAS -----	RATINGS*				
	1	2	3	4	5
STAFF COOPERATION					
Administrative interview	53.3%	25.0%	19.2%	2.5%	0%
Compiling discharge list	30.8%	30.0%	24.2%	10.8%	4.2%
Pulling treatment records	39.2%	34.2%	15.8%	8.3%	2.5%
QUALITY OF RECORDS					
Organization	16.7%	37.5%	31.7%	9.2%	5.0%
Completeness	14.2%	36.7%	30.8%	14.2%	4.2%
Legibility	10.0%	38.3%	38.3%	8.3%	5.0%

*Meanings of ratings:

- 1 = well above average
- 2 = somewhat above average
- 3 = about average
- 4 = somewhat below average
- 5 = well below average

Overall, the facility staff were very cooperative (about three-quarters were rated above average), but in compiling the sampling frames the ratings were somewhat lower because the facilities were often unable to produce a list according to our specifications. The ratings for the quality of records show that about half the facilities were rated above average. The greatest percentage of below average facilities was found in the completeness rating which shows that almost one-fifth of the facilities were rated below average.

cc

N. Bayless
S. Englehart
S. Gardner
C. Maffeo
L. Mohadjer
D. Morganstein
M. Pacious
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MEMORANDUM

TO: Helen Batten **DATE:** January 21, 1991

FROM: Leyla Mohadjer

SUBJECT: NIDA Drug Treatment Project - Sample Weights for Visitation Facilities and Discharged Case Records

Phase II (site visits) of the NIDA drug treatment survey included data collection for two separate samples; 1) the visited facilities and 2) a sample of discharged case records selected within the visited facilities. We, therefore, produced two sets of weights, one set of weights for the estimation of characteristics of the visited facilities, and another set for estimation of characteristics of discharged case records. Sampling weights were computed based on the specifications described in the following sections.

1. Sample Weights for the Administered Facilities

A subsample of facilities was preselected to provide about 120 visitation facilities with about equal samples from the four treatment modality strata, that is, 30 from each modality. The following table provides the number of preselected facilities for visitation, and the number of facilities who participated in phase I of the survey. These facilities were sampled from the first four sampling strata, waves one through three of the first half-sample.

Sampling Strata	No. of preselected facilities for the visitation sample	No. of facilities in the visitation sample
1. Hospital Inpatient	90	73
2. Residential	60	53
3. Outpatient Detox/Maint.	57	45
4. Outpatient Drug Free	87	62
5. Alcohol Only	0	0
6. Unknown	0	0

The sample cases given in the above table were preselected to provide the required number of visitation facilities based on the nonresponse rates observed for the pilot study. However, nonresponse rates for the main study were different than those observed in the pilot study. The study design required about 30 completed interviews within each of the four strata. With the main study response rates, it was expected that the above sample will produce many more than 30 completed interviews per stratum. Therefore, the sample of preselected facilities for visitation were put into sampling waves (by introducing another stage of sampling) to achieve a sample that provided the required number of visitation facilities within each stratum. Different waves were released for different strata depending on the response rate observed within each strata.

The base weight for the j th visitation facility should be computed as

$$W_{vlij} = W_{bij} * \frac{1}{P_{vij}}$$

where

W_{vlij} = the base weight associated with the j th visitation facility in the i th stratum

W_{bij} = the base weight associated with the j th facility in the i th stratum

P_{vij} = the probability that the j th facility in the i th stratum was selected for visitation

P_{vij} includes the probability of selecting the j th facility from the main sample including the number of waves released for visitation.

The final weight for the visitation facilities included nonresponse adjustments by stratum (similar to the main facility sample) i.e., adjustments for those facilities who responded to the main sample but did not participate in the visitation survey. The final weight for the visitation sample was computed as

$$W_{v2ij} = W_{v1ij} * \frac{\sum_{(A'C)} W_{1vij}}{\sum_{(B'C)} W_{1vij}}$$

where $\sum_{(A'C)}$ is the sum over those facilities who were selected for visitation (and part of the waves that were released for interview) and were eligible for the main sample, and $\sum_{(B'C)}$ is the sum over those who responded to the visitation survey.

As noted earlier, the visitation facilities were preselected from sampling strata 1 through 4 to satisfy the tight time schedule planned for data collection. As a result, the total sampling weights for the visitation facilities is equal to an estimate of the total number of facilities in sampling strata 1 to 4, rather than the total number of eligible facilities in the targeted universe (including eligible facilities in sampling strata 5 and 6).

2. Sample Weights for Case Records

Note that the final sampling weights given in the above equation are at facility level, that is, they can be used to estimate facility characteristics, rather than case record characteristics. Sample weights for case record statistics further adjusted for probabilities of selection of the case records and case record nonresponse, i.e., within those facilities who responded to the visitation survey, adjustments were made for those eligible case records that were sampled but no information was collected on them.

The base weight for the k th case record in the j th visitation facility was computed as

$$W_{c1ijk} = W_{v2ij} * \frac{1}{P_{cijk}}$$

W_{c1ijk} = the base weight associated with the kth case record from the jth visitation facility in the ith stratum

P_{cijk} = the probability that the kth case record from the jth facility in the ith stratum was selected for visitation

The final weight for the case record sample included nonresponse adjustments, i.e., adjustments for the case records that were missing. The final weight for the visitation sample was computed as

$$W_{c2ijk} = W_{c1ijk} * \frac{\sum_{(A'C)} W_{c1ijk}}{\sum_{(B'C)} W_{c1ijk}}$$

where $\sum_{(A'C)}$ is the sum over the eligible case records selected in the sample, and $\sum_{(B'C)}$ is the sum over those case records for which data was collected.

The case records in the sample were mainly divided into the following groups:

- (1) case records that were determined to be ineligible at the screening time (includes duplicate cases),
- (2) case records that were determined to be eligible and were abstracted, and
- (3) case records with missing information.

Eligibility status could not be determined for those cases with missing records. We, therefore, assumed that the eligibility rate among cases with missing records was the same as those with known eligibility within each of the visited facilities. For example, we

assumed an eligibility rate of 90 percent among those cases with missing data in a facility if 90 percent of case records with known eligibility were actually eligible within the facility.

It should be noted that, similar to the visitation facility sample, the total weighted number of case records is an estimate of the associated true total for facilities in sampling strata 1 to 4, rather than the entire targeted universe.

cc: Paul Hurwitz

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MEMORANDUM

TO: Helen Batten

DATE: 1/15/91

FROM: James L. Green

SUBJECT: Review of Replicate Weighting and Variance Estimation for the NIDA Drug Treatment Project

1. Phase I (Main Survey)

The following steps were taken to construct replicate weights and compute variances for the selected variables from the NIDA Drug Treatment project:

- 1) The 1803 facilities that were released for screening were sorted hierarchically by stratum, census region, ownership/sector and size. Profit and not for profit facilities were combined to form the private sector while local, state and federal government facilities were combined to form the public sector. The facilities were split into thirty groups of equal size (within plus or minus 1) using a systematic selection as follows:

Position in File	Group	Position in Group
1	1	1
2	2	1
.	.	.
.	.	.
30	30	1
31	1	2
32	2	2
.	.	.
.	.	.

Thirty jackknife replicates were then defined by dropping one group (1..30) from the full sample for each replicate; in general, the jth jackknife replicate was defined by dropping the jth group from the sample.

- 2) Thirty replicate base weights were calculated for each case as the product of the full sample base weight for the case and a factor of either 30/29 or 0 depending on whether the case was included in the replicate or not:

$$\text{rep_base_wgt}_j = (C_j) * \text{full_sample_base_wgt}$$

where

$$C_j = (30/29) \text{ if the case was included in the } j\text{th replicate; } 0 \text{ otherwise} \\ (j = 1..30)$$

- 3) Thirty replicate specific nonresponse adjustment factors were calculated for each of the six different strata used in the sample selection. Within a given stratum, the nonresponse adjustment factor for a given replicate was calculated as the ratio of the sum of the replicate base weights for eligible facilities to the sum of the replicate base weights for facilities which completed or partially completed the questionnaire:

$$\text{rep_nr_adj_fact}_{ij} = \frac{\sum_{\text{eligibles}} \text{rep_base_wgt}_{ij}}{\sum_{\text{completes}} \text{rep_base_wgt}_{ij}}$$

where

$$i = \text{stratum } 1..6$$

$$j = \text{replicate } 1..30$$

- 4) Thirty replicate final weights were calculated for each case as the product of the replicate base weight for the case and the replicate specific nonresponse adjustment factor for the stratum to which the case belonged:

$$\text{rep_final_wgt}_j = \text{rep_base_wgt}_j * \text{rep_nr_adj_fact}_{ij}$$

where

$$i = \text{stratum } 1..6$$

j = replicate 1..30

- 5) The standard errors of totals and means for the selected variables were computed with WESVAR using the replicate final weights and the JK1 option.

2. Phase II (Site Visits)

Steps 1) through 4) were repeated to produce two additional sets of replicate weights for the visited facilities and the sample of case records. The base weights and nonresponse procedures applied to each set of replicate weights were the same as the corresponding steps used for visited and case record sample weighting.

cc: Paul Hurwitz

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MEMORANDUM

TO: Paul Hurwitz

DATE: October 11, 1990

FROM: Leyla Mohadjer

SUBJECT: NIDA Drug Treatment Project - Computation of Sample Weights

This memo provides a description of the sample weights computed for the drug treatment facilities in the NIDA survey. The computation of the sample weights was done in two main steps. The first step involved the derivation of the base weights, and the second step computed the final weights by adjusting the base weights to account for nonrespondents. A description of each of the weighting steps is provided in the following section.

Sample Weights for the Drug Treatment Facilities

The facilities in the NIDA survey were sampled based on a stratified sample design in which facilities were grouped into six strata. Different sampling rates were applied within each stratum to provide the required number of facilities of various types. It should be noted that there are four treatment modality strata in this survey. Because of some inadequacies in the sampling frame, however, the sample was selected from six strata. The first four strata were the same as the modality strata, and the facilities coming from the last two strata are to be included in the first four modality strata, as appropriate, for analysis purposes. Therefore, the sample design used for this study did not produce a self weighting sample of facilities. (A self-weighting sample is one in which all selected units in the sample have the same probability of selection.) The sampled facilities within each stratum had different initial probabilities of selection. Further variations in the probabilities were introduced when facilities in common with the ISR survey were subsampled at a rate of 1/2 to decrease the overlap between the two studies.

A sampling weight had to be computed for each facility that reflected its appropriate probability of selection. This was necessary for the production of unbiased estimates. The sample weights should be used with the data to provide estimates of statistics about the entire population of facilities or subgroups of facilities.

Sample weighting was done to accomplish the following objectives:

- To bring data up to the dimensions of the population totals;
- To adjust for unequal probabilities of selection for different facilities in the sample; and
- To minimize biases arising from the fact that nonrespondents may be different from those who cooperate;

Sample weighting was carried out in two steps. The first step involved the computation of the base weights to compensate for the unequal probabilities of selection. The second step adjusted the base weights to account for the nonresponding facilities. The following provides a description of different stages of sample weighting for the NIDA survey.

1 Base Weights

Typically, the base weight attached to a sample unit from any sample design is the reciprocal of the selection probability of that unit. The base weights were computed in three stages, to account for the three stages of sample selection. The following three sections include discussions of the three stages of sample selection.

1.1 First Stage of Sample Selection

In the first stage of selection, facilities were sampled within each of the six strata based on a set of pre-specified sampling rates. A sample of about 2,486 facilities was selected to provide about 1,000 eligible cooperating facilities.

The first stage weight for facility j in stratum i was calculated as the inverse of the probability of selection for that facility, and is denoted by:

$$W_{1ij} = \frac{1}{P_{ij}}$$

where

W_{1ij} = the first stage weight associated with the j th facility in the i th stratum

P_{ij} = the probability of selecting the j th facility in the i th stratum

i = 1, 2, ..., 6

j = 1, 2, ..., n_i

and

n_i = the number of facilities selected in the i th stratum.

Table 1 shows the sampling rates used within each strata and the number of facilities sampled prior to subsampling the facilities in common with the ISR survey. The values of P_{ij} are equal to the sampling rates, and n_i sample sizes are equal to the number of facilities given in Table 1.

Table 1. Distribution of number of facilities selected (prior to subsampling those in common with the ISR Survey), sampling rates, and the first stage weights by strata.

Stratum	Sampling rate (P_{ij})	Number of facilities selected	First stage weights
1. Hospital Inpatient	0.35	239	2.86
2. Residential	0.25	293	4.00
3. Outpatient Detox/Maint.	0.35	159	2.86
4. Outpatient Drug Free	0.25	735	4.00
5. Alcohol Only	0.20	250	5.00
6. Unknown	0.20	810	5.00
Total		2,486	

1.2 Second Stage of Sample Selection

In the second stage, those facilities in common with the ISR survey were subsampled at a rate of 1/2 to reduce the overlap between the two surveys.

The second stage weight for facility j in stratum i was calculated as the product of the first stage weight and the inverse of the probability of selection as the result of subsampling due to the ISR survey, and is denoted by:

$$W_{2ij} = W_{1ij} * \frac{1}{(P_{oij}|P_{ij})}$$

where

$$\begin{aligned} W_{2ij} &= \text{the second stage weight associated with the } j\text{th facility in the } i\text{th stratum} \\ P_{oij}|P_{ij} &= \begin{aligned} &1 \text{ if the } j\text{th facility in the } i\text{th stratum was not subsampled} \\ &\text{given that it was selected in the sample} \\ &= 1/2 \text{ if the } j\text{th facility in the } i\text{th stratum was subsampled and} \\ &\text{retained given that it was selected in the sample} \\ &= 0 \text{ if the } j\text{th facility in the } i\text{th stratum was subsampled and} \\ &\text{excluded given that it was selected in the sample} \end{aligned} \end{aligned}$$

W_{1ij} , P_{ij} , i , and j are as defined in section 1.1.

Table 2 shows the number of facilities that were retained in the sample after subsampling was carried out at this stage, and the second stage weights.

Table 2. Distribution of the number of facilities in the NIDA sample by subsampling status within strata (after eliminating one half of the facilities in common with the ISR survey).

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	2nd stage weight	Frequency	2nd stage weight	
1. Hospital Inpatient	233	2.941	3	5.882	236
2. Residential	277	4	8	8	285
3. Outpatient Detox/Maint.	113	2.941	23	5.882	136
4. Outpatient Drug Free	651	4	42	8	693
5. Alcohol Only	240	5	5	10	245
6. Unknown	748	5	31	10	779
Total	2,262		112		2,374

1.3 Third Stage of Sample Selection

The sample of 2,374 facilities (as given in Table 2) was randomly divided into two equal half-samples. Each half-sample was further sub-divided into five waves consisting of about 665, 190, 140, 140, and 50 facilities. For the first half-sample, the first four waves were released. For the second half-sample, only the first wave was released. The selection probability for each unit depends on the number of waves which were released and worked in each half-sample. That is, the third stage of weighting involved adjusting the base weights to account for the number of waves released for each half-sample. The weight computed for the third stage of selection was equal to the base weight. A description of the base weights is given in the following section.

1.4 Base Weights

The base weight for facility j in stratum i was calculated as the product of the second stage weight and the weight computed for the third stage of sample selection, and is denoted by:

$$W_{Bij} = W_{lij} * \frac{1}{h}$$

or

$$= \frac{1}{(P_{ij} \cdot P_{oij} | P_{ij}) (h)}$$

where

W_{Bij} = the base weight associated with the j th facility in the i th stratum

h = proportion of the sample that was worked in the half-samples based on the number of subsamples released

$P_{ij}, P_{oij} | P_{ij}, i$, and j are as defined in section 1.1.

A total of 1,803 facilities (out of 2,374) were released for screening. Table 3 shows the base weights for the facilities in the released sample.

Table 3. Distribution of base weights for the screened facilities in the sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Base weight	Frequency	Base weight	
1. Hospital Inpatient	177	3.873	2	7.745	179
2. Residential	210	5.267	6	10.534	216
3. Outpatient Detox/Maint.	85	3.873	18	7.745	103
4. Outpatient Drug Free	500	5.267	26	10.534	526
5. Alcohol Only	182	6.584	5	13.167	187
6. Unknown	569	6.584	23	13.167	592
Total	1,723		80		1,803

Some of the sampled facilities were determined to be ineligible for the survey during the screening process. Specifically, 1,531 facilities were screened as eligibles, 256 facilities were ineligible, and 16 facilities refused to complete the screener. The ineligible facilities were excluded from the remainder of the steps involved in the weighting process. The exclusion of the ineligibles resulted in the aggregate of the base weights for eligible facilities to be an estimate of the total number of eligible facilities in the target population (assuming that the refusals were also eligible for the survey). That is,

$$\sum_i \sum_j W_{Bij} = \sum_i \sum_j W_{Bij1} + \sum_i \sum_j W_{Bij2}$$

where

W_{Bij1} = the base weight for an eligible facility j in stratum i

W_{Bij2} = the base weight for an ineligible facility j in stratum i :

Note that

$$\sum_i \sum_j W_{Bij1} = \text{estimated total number of eligible facilities in the sampling frame}$$

$$\sum_i \sum_j W_{Bij2} = \text{estimated total number of ineligible facilities in the sampling frame}$$

and

$$\sum_i \sum_j W_{Bij} = \text{estimated total number of facilities in the sampling frame.}$$

2 Final Weights

Nonresponse may vary by population subgroups and type of facility and thus, tends to distort the distribution of the sample. That is, survey estimates of means and proportions may be biased if facilities that were identified and did not cooperate are different with respect to the characteristics of interest from those who responded. Nonresponse adjustment steps compares the original sample selected with those who responded and try to adjust for those who did not respond. Furthermore, estimates of total populations will be underestimated unless some allowance is made for nonrespondents. The allowance will be made by upward adjustment to the base weights for responding facilities to account for those facilities who did not respond.

The facilities in the sample were mainly divided into the following groups:

- (1) facilities that were determined to be ineligible at the screening phase,
- (2) facilities who completed the screener and were determined to be ineligible at the questionnaire phase,
- (3) facilities that refused to participate in the survey at the screening phase,
- (4) facilities that completed the screener but refused to respond to the questionnaire,
- (5) facilities that were not reached even after the maximum number of contacts were made, and
- (6) facilities who completed, or partially completed, the questionnaire.

The ineligible cases, described in items (1) and (2) above, were excluded from the nonresponse adjustment computations. The eligibility status of the facilities in items (3), (4), and (5) were unknown at the conclusion of the survey. Table 4 shows the distribution of the sampled facilities by eligibility status.

Table 4. Distribution of the eligible respondents, refusals, and "maximum contact" facilities by sampling strata.

Stratum	Screener		Questionnaire			
	Eligible respondents	Refusals	Eligible respondents	Exclusions (Ineligibles & duplicates)	Unknown eligibility	
					Refusals	Others
1. Hospital Inpatient	172	1	138	6	15	13
2. Residential	203	1	185	1	6	11
3. Outpatient Detox/Maint.	99	1	80	6	9	4
4. Outpatient Drug Free	467	4	372	18	45	32
5. Alcohol Only	135	2	91	21	12	11
6. Unknown	455	7	317	37	54	47
Total	1,531	16	1,183	89	141	118

For the production of nonresponse adjustments, we assumed that refusals, both as the screener and at the questionnaire phase, were eligible cases. Those with unknown eligibility status were assumed to be ineligible for the survey. This approach was about same as assuming an eligibility rate of about 55% among facilities with unknown eligibility status.

The final weight for facility j in stratum i was given by

$$W_{Fij} = W_{Bij} * \frac{\sum_{(Ai)} W_{Bij}}{\sum_{(Bi)} W_{Bij}}$$

where W_{Fij} = the final weight for facility j in stratum i, $\sum_{(Ai)}$ is the sum of all eligible facilities in stratum i, and $\sum_{(Bi)}$ is the sum over those facilities who responded in stratum i. Table 5 provides the nonresponse adjustments applied to the NIDA sample.

Table 5. Distribution of nonresponse adjustments for the NIDA drug treatments sample.

Stratum	Eligible respondents		Expected eligibles in the sample		Nonresponse adjustment $\frac{\sum_{(Ai)} W_{Bij}}{\sum_{(Bi)} W_{Bij}}$
	Frequency	Total weights $\sum_{(Bi)} W_{Bij}$	Frequency	Total weights $\sum_{(Ai)} W_{Bij}$	
1. Hospital Inpatient	138	534.42	152	600.26	1.123
2. Residential	185	1000.69	192	1037.56	1.037
3. Outpatient Detox/Maint.	80	367.90	90	406.63	1.105
4. Outpatient Drug Free	372	2069.84	421	2333.18	1.127
5. Alcohol Only	91	612.26	105	704.43	1.151
6. Unknown	317	2198.88	378	2613.64	1.189
Total	1183	6784.00	1340	7695.69	

Table 6. Distribution of final weights for the respondent facilities in the NIDA drug treatment sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Final weight	Frequency	Final weight	
1. Hospital Inpatient	138	4.35	0	—	138
2. Residential	180	5.46	5	10.92	185
3. Outpatient Detox/Maint.	65	4.28	15	8.56	80
4. Outpatient Drug Free	351	5.94	21	11.87	372
5. Alcohol Only	89	7.57	2	15.15	91
6. Unknown	300	7.83	17	15.65	317
Total	1,123		60		1,183

Appendix

Sample Weights used for the Preliminary Analysis

The methodology for the computation of sample weights for the preliminary analysis was similar to the one applied to the final sample, as described in this memorandum. Base weights were computed based on the three stages of sampling described in section 1.1 to 1.3. The treatment of ineligible facilities was the same as that used for the final sample, i.e., they were excluded from the steps involved in nonresponse adjustments.

The preliminary weights were computed before the completion of data collection for the first half of the sample. As a result, many facilities were not finalized and had a disposition code of "Pending" at the time the sample weights were computed. For the computation of nonresponse adjustments, all "Pending" facilities were assumed to be eligible for the survey. This assumption overestimated the total number of eligible facilities in the population since not all "Pending" facilities were later finalized as eligibles.

The following tables provide the base weights, the nonresponse adjustments, and the final weights used in the preliminary analysis of the data.

Table A.1. Distribution of base weights for the screened facilities in the preliminary sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Base weight	Frequency	Base weight	
1. Hospital Inpatient	113	6.128	0	0	113
2. Residential	133	8.333	4	16.667	137
3. Outpatient Detox/Maint.	55	6.128	10	12.255	65
4. Outpatient Drug Free	315	8.333	17	16.667	332
5. Alcohol Only	114	10.417	4	20.833	118
6. Unknown	356	10.417	18	20.833	133
Total	1,086		53		1,139

Table A.2. Distribution of the eligible respondents, refusals, and "Pending" facilities by sampling strata for the preliminary sample.

Stratum	Screener		Questionnaire		
	No. of eligible respondents	No. of refusals	No. of eligible respondents	No. of refusals	Number pending*
1. Hospital Inpatient	109	0	76	2	28
2. Residential	130	0	114	0	16
3. Outpatient Detox/Maint.	63	1	46	0	13
4. Outpatient Drug Free	286	3	206	3	71
5. Alcohol Only	86	2	49	0	25
6. Unknown	292	5	166	4	110
Total	966	11	657	9	263

* The facilities with the "Pending" disposition code were not finalized at the time the preliminary weights were being computed. The "pending" facilities were assumed to be eligible facilities for the computation of nonresponse adjustments.

Table A.3. Distribution of nonresponse adjustments for the NIDA drug treatments preliminary sample

Stratum	Eligible respondents		Expected eligibles in the sample		Nonresponse adjustment $\frac{\sum_{(A)} W_{Bij}}{\sum_{(B)} W_{Bij}}$
	Frequency	Total weights $\sum_{(B)} W_{Bij}$	Frequency	Total weights $\sum_{(A)} W_{Bij}$	
1. Hospital Inpatient	76	465.69	106	649.51	1.395
2. Residential	114	975.00	130	1108.33	1.137
3. Outpatient Detox/Maint.	46	337.01	60	428.92	1.273
4. Outpatient Drug Free	206	1825.00	283	2491.67	1.365
5. Alcohol Only	49	531.25	76	812.50	1.529
6. Unknown	166	1854.17	284	3125.00	1.685
Total	657	5988.11	939	8615.93	

Table A.4. Distribution of final weights for the respondent facilities in the NIDA drug treatment sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Final weight	Frequency	Final weight	
1. Hospital Inpatient	76	8.55	0	—	76
2. Residential	111	9.47	3	18.95	114
3. Outpatient Detox/Maint.	37	7.80	9	15.60	46
4. Outpatient Drug Free	193	11.38	13	22.76	206
5. Alcohol Only	47	15.93	2	31.86	49
6. Unknown	154	17.56	12	35.11	166
Total	618		39		657

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